The Second Mediterranean Emergency Medicine Congress

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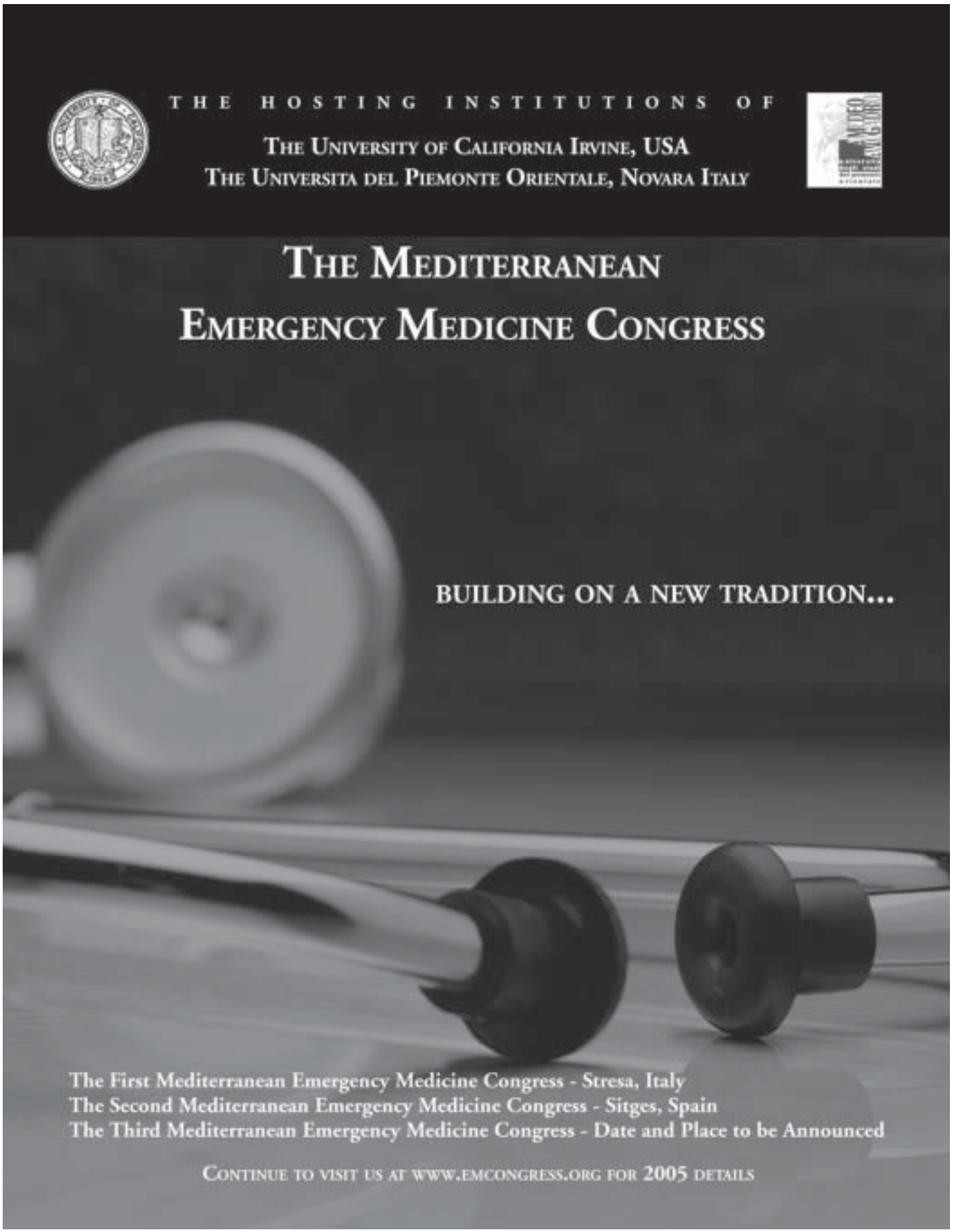
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Oral Presentations

AN INTERACTIVE APPROACH TO TEACHING TRAUMATOLOGY: COMPARISON BETWEEN AUCKLAND AND AL AIN

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Aim: To determine the effectiveness of the problem-solving interactive approach for teaching traumatology from perspectives of students in two different geographical and cultural settings.

Methods: The n-of-1 study design was used. A questionnaire focusing on instructional skills of a single tutor who used the problem-solving interactive approach to teach traumatology was distributed to 4th year medical students of Auckland University, New Zealand (n = 22) and UAE University, Al-Ain (n = 28). Both groups had limited knowledge in trauma. Students rated 16 items on a 7 point Likert-type scale and were invited to have open-ended comments. Mann-Whitney U test was used to compare the two groups.

Results: UAE students had a more favorable perception of the instructor's clarity of speech (p = 0), ability to explain the material clearly (p = 0.05), structure of the session (p = 0.02), usefulness of class discussions (p= 0) and overall effectiveness of teaching (p = 0.04). Open comments of both groups were highly supportive for the interactive approach for teaching traumatology.

Conclusions: The n-of-1 study design is a useful approach to examine effectiveness of teaching performance in different settings. The interactive approach to lecturing can be an effective alternative or supplement to traditional instruction in teaching traumatology. When comparing and utilizing new teaching approaches in diverse cultural settings, socio-cultural, psychological and linguistic variables must be considered because they may influence the way in which the students perceive, conduct themselves in, and engage in novel learning situations.

EVALUATION OF THE UTILITY OF AN OFF-SERVICE ORTHOPEDIC ROTATION FOR EMERGENCY MEDICINE RESIDENTS

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Objective: Emergency Medicine (EM) residents perform a number of off-service rotations throughout their training. The utility of these rotations in enhancing their knowledge and performance in these areas has not been studied. We have previously shown that the majority of off-service rotations do not improve inservice scores. We will evaluate whether an orthopedic off-service rotation (ORTH) will improve resident skills in orthopedics.

Methods: Published criteria for skills and knowledge that should be obtained during an ORTH were reviewed. Based upon these criteria, we developed a novel tool to evaluate practical skills learned during the ORTH. This included splint application (SA), performance of a specialized orthopedic examination (EX) and radiographic interpretation and general knowledge (XR). A committee of EM trained physicians devised scoring criteria. A 100-point scale was devised among the 3 areas: SA 27%, EX 25%, XR 48%. The same EM physicians tested all subjects. Residents who had completed an ORTH were compared to those who had not completed an ORTH. Comparisons were made only between residents of the same post-graduate year. Data was analyzed by Student's t-Tests. Alpha was set at 0.05.

Results: 8 subjects were tested, 4 prior to their ORTH, and 4 after completing their ORTH. Results were as follows: With ORTH Without ORTH P-value SA 57.9%+/-25.2% 60.5%+/-21.0% 0.84 EX 64.0%+/-14.5% 62.3%+/-18.5% 0.89 XR 61.3%+/-16.1% 55.8%+/-14.5% 0.54 Total 58.7%+/-10.3% 61.3%+/-15.9% 0.74

Conclusion: The ORTH did not appear to affect the subject's ability to perform on the examination. This data correlates with results obtained from previous studies of performance on inservice examinations. Reevaluation of off-service rotations for EM residents is essential. Validation of these results in multiple centers is necessary. Development of tools to evaluate residents in other off-service rotation is warranted.

DO OFF-SERVICE ROTATIONS IMPROVE IN-SERVICE EXAM SCORES FOR EMERGENCY MEDICINE RESIDENTS?

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Objectives: To gain experience in managing a diverse patient population, Emergency Medicine (EM) residents are required to rotate through off-service medical and surgical services. The educational value of these off-service rotations has not yet been studied.

Methods: We retrospectively compared residents who had completed various off-service rotations at the time of the inservice exam to residents who had not. Scores for the last seven years are reported. Comparisons were only made between residents of the same post-graduate year. Scores were divided into clinical content topics. Nine off-service rotations were compared: Trauma Surgery (TS), Obstetrics and Gynecology (OB), Coronary Acute Care (CCU), Orthopedics (ORT), Otolaryngology and Ophthalmology (ENTO), Prehospital care (EMS), Toxicology (TOX), Administration (ADM), and Neurology (NEU). Scores were reported as percentage means +/- standard deviations. We compared means using ANOVA. All tests were two-tailed and alpha was set at 0.05.

Results: N Pre-Rotation N Completed P TS 50 63+/-12 26 65+/-18 0.34 OB 48 61+/-26 28 72+/-26 0.06 CCU 49 68+/-11 21 76+/-13 0.02 ORT 43 74+/-19 20 73+/-19 0.98 ENTO 42 72+/-13 22 70+/-14 0.55 EMS 40 78+/-10 13 70+/-20 0.15 TOX 32 75+/-14 17 87+/-13 0.01 ADM 29 77+/-27 12 86+/-18 0.26 NEU 45 69+/-16 21 72+/-15 0.59

Conclusion: Residents that rotate on selected off-service rotations (CCU and TOX) score better on the annual in-service exam in those clinical content areas. The majority of off-service rotations do not improve resident's inservice exam scores. Reevaluation of off-service rotations for EM residents is warranted. Prospective evaluation of resident's clinical skills in specialty content areas is clearly needed.

CAMPUS BASED EMS: A SURVEY BY THE NATIONAL COLLEGIATE EMS FOUNDATION

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Study objective: Campus based EMS (CBEMS) is a unique model for delivery of prehospital care. The National Collegiate Emergency Medical Services Foundation (NCEMSF) was founded to serve as a resource for CBEMS groups. NCEMSF created a web based data collection system to gather descriptive data on CBEMS.

Methods: An internet survey was conducted of CBEMS groups based at the NCEMSF homepage. Data was collected on numerous variables. Each school had a unique identifier and a contact person identified to verify data as necessary.

Results: A total of 175 groups entered information into the database. 148 groups were identified as providing CBEMS. The other 27 groups were excluded on the basis of not providing EMS service or not being collegiate based. The level of service was: First Responder 8.8%, Basic Life Support 69.9.2%, Intermediate Life Support 5.1.%, Advanced Life Support 16.2%. Transport capabilities were provided by 29.1% of CBEMS. Average response time was estimated at 2.47 (95 %CI 2.17-2.77) minutes. Early defibrillation via AED or ALS was available by 63.5% of CBEMS. 35.1% of CBEMS provided service to the community beyond the campus. 36.5% of the services operated 24 hours a day 7 days a week. The average call volume per year was 367.5 (95%CI 302.5-432.7) responses. Each group averaged 35.3 (95%CI 30.6-40.0) members. Over the past 5 years, an average of 4.3 new CBEMS groups were formed per year. 11 CBEMS were based at international schools.

Conclusions: CBEMS may be an under utilized resource that may be able to provide rapid response of prehospital emergency care, including early defibrillation. These systems may be considered in times of disaster. Limitations: More information should be evaluated regarding acuity of patients and nature of calls.

EMERGENCY PHYSICIAN EDUCATION IN THE NETHERLANDS - DESCRIPTION OF THE FIRST 2 YEARS OF A NEW EM RESIDENCY PROGRAM

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EM does not exist as a recognized medical specialty in The Netherlands. Now, loosely supervised junior residents staff most EDs. In 2000 OLVG became the first Dutch hospital to start a 3-year EP training program. OLVG is a level-II trauma-center teaching hospital with the busiest ED in The Netherlands. ¾ of the ED patients are self-referred, 12% are referred by a GP and 11% arrive by ambulance.

Goal: To describe the issues that arise when developing and implementing an EM training program in an environment without previous experience with the specialty. Issues and Solutions 1. General Medical Environment A long development phase aimed at overcoming institutional, political and financial barriers to a new medical specialty preceded the start of the EM training program. 2. ED Environment Before the creation of the EM training program specialists other than EPs treated most ED patients. Now there is a gradual shift toward more of these patients being evaluated by EPs. This change creates education and quality of care issues for hospital departments with residents to educate. An ongoing dialogue and cooperative spirit between hospital departments has tempered what would otherwise be contentious issues. 3. Patient Acuity/Procedures The OLVG ED has traditionally had a low critically ill patient census. Training EM residents in critical procedures is therefore difficult. The pressure to educate other residents compounds this difficulty. Some procedural training has therefore shifted to cadaver and manikin models. Clinical rotations at other hospitals with larger trauma volumes are being considered also. 4. Supervision Since no board-certified EP resides in The Netherlands one was recruited to serve as a role model and educator for resident EPs. This individual also acts as a liaison between the ED and other hospital departments as the EM program evolves.

Conclusions: Beginning an EM residency-training program in a medical environment unfamiliar with the specialty is fraught with difficulties. These difficulties can be overcome with a combination of thoughtful planning, creativity, cooperation with other hospital departments and expert help from the US. Our experience at the OLVG starting such a program may have important implications for hospitals in other countries desirous of embarking on a similar venture.

EDUCATION IN EMERGENCY MEDICINE: EUROPEAN CURRICULUM BASED PILOT PROJECT CROATIA - AUSTRALIA

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Emergency Medicine (EM) doesn't exist as a speciality in Croatia. Our goal is to establish it primarily by educating medical professionals, together with building modern Emergency Departments (ED) and improving Emergency Medical Services (EMS). This is a lengthy process for the national health system, therefore, a stepwise approach has been outlined: 1) Short-term: ALS, PLS, ATLS, BLS-AED courses for all healthcare professionals involved with emergencies - started in 2002. 2) Interim: education for doctors, nurses and EMTs in EDs and EMS, until development of EM as a full speciality. This task has been set within our Pilot Project in the Koprivnica county in Croatia: how to educate a core group of people from a particular hospital(s) in the shortest time possible to achieve enough knowledge, skills and competence to work in the ED that is being built. For that purpose, a group of 5 doctors and 5 nurses were assigned and problem oriented body of knowledge and skills according to the European curriculum in EM was identified. Departments of Emergency Medicine at Western and Sunshine Hospital in Footscray, Australia were chosen due to the possibility that Croatian medical professionals can get hands-on-patient training in the accredited tertiary ED, provided with the conditional registration by the medical board in the relevant region of Australia. EM educational course has been designed including knowledge, clinical and other skills: 1. Clinical EM - Tutorial component - 30-hour seminar-based intensive course in Croatia

covering key topics and educational activities during clinical attachment period in Australia. Assessment included a written pre-test, coupled with a skills test. 2. Clinical placement in EM: 14-week placement in 2 groups of 5 in an approved adult and paediatric ED, ICU and EMS. Assessment: 1. Clinical competence hurdles 2. Critical case review 3. Supervisor assessment. 3. Emergency Medicine Project - to be completed within 6 months of the return to the home institution that will address an organisational, administrative, educational or process issue, demonstrate the application of the principles of EM and facilitate information sharing between EDs in the home region. The first group of candidates left for Australia in April 2003 and is scheduled to return mid August; the second group is leaving in September.

DO CO-INTOXICANTS INCREASE ADVERSE EVENT RATES IN THE FIRST 24 HOURS IN PATIENTS RESUSCITATED FROM ACUTE OPIOID OVERDOSE?

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Background: Patients frequently arrive in emergency departments after being resuscitated from opioid overdose. Autopsy studies suggest that multi-drug intoxication is a major risk factor for adverse outcomes after acute heroin overdose patients. If this is true, there may be high-risk drug combinations that identify patients who require more intensive monitoring and prolonged observation. Our objective was to determine the impact of co-intoxication with alcohol, cocaine or CNS depressant drugs on short term adverse event rates in patients resuscitated from acute opioid overdose.

Methods: Data were extracted from the database of a prospective opioid overdose cohort study conducted between May 1997 and May 1999. Patients were prospectively enrolled if they received naloxone for presumed opioid overdose. Investigators gathered clinical, demographic and other predictor variables, including co-intoxicants used. Patients were followed to identify pre-specified adverse outcome events occurring within 24 hours, and multiple logistic regression was used to determine the association of concomitant drug use on short term adverse event rates.

Results: Of 1155 patients studied, 58 (5%) had pure opioid overdose and 922 (80%) reported co-intoxicants, including alcohol, cocaine and CNS depressants. Overall, out of 1056 patients with known outcome status there were 123 major adverse events (11.6%) and 194 minor adverse events (18.4%). After adjustment for age, gender, HIV status, cardiovascular disease, pulmonary disease and diabetes, we found that co-administration of alcohol, cocaine or CNS depressants, alone or in combination, was not associated with increased risk of death or adverse events during the 24-hour follow-up period.

Conclusion: In patients resuscitated from acute opioid overdose, short term outcomes are similar for patients with pure opioid overdose and multi-drug intoxications. A history of co-intoxication cannot be used to identify high risk patients who require more intensive ED monitoring or prolonged observation.

EMERGENCY DEPARTMENT TEAM PREPAREDNESS FOR BIOLOGICAL TERROR

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The possibility of using biological weapon on Israel, emphasis the need of health services preparedness for such a threat. Civil and army medical corps cooperated together in order to develop preparedness program for all Emergency Departments (ED) in Israel. All ED Directors as well as Head Nurses received previous to the planed workshop up date articles related to biological terror. Pre test questionnaires were sent to be completed, before the workshop by team, due to participate in the workshop. 47% of the workshop' participants reply the questionnaires and only 34% of them gave the correct answers. 8 workshops covered representative from all ED and divided the country regionally. 266 participants included 86 physicians and 180 nurses.

Those team member where responsible to teach the subject in their ED using CD with all the material from the workshop. Each workshop splintered to lectures and simulations with activity participants from the audience and actors who trained to play the role of patients, suffering from the disease that have been study about in the workshop, such as Anthrax and Smallpox. The simulation also included cases that where unrelated to biological threat. Cases developed upon the treatment given by the audience, while the instructor provided medical data related to the patients ' condition. At the end of the workshop, final test was given, and only 35% of the participants responded, 59% of them gave the correct results.

Evaluation sheet was given at the end of the workshop. From the feedback of the participants we studied the importance of such a subject, and the need of using simulations as a learning tool. The simulations emphasis the difficulties as well as solutions requested while dealing with biological terror. As continue for this program we are trying to find a way that will provide further training and maintenance of this knowledge.

PHARMACOKINETICS OF CENTRAL RESPIRATORY DEPRESSION IN ACUTE ORGANOPHOSPHATE POISONINGS

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Classic teaching of organophosphate poisonings state that death occurs from peripheral cholinergic stimulation. Recent evidence suggests that mortality is partially related to CNS respiratory center depression (CRD), but the exact mechanism is unknown. In the following studies we investigated the hypothesis that acute organophosphate poisonings causes overstimulation of CNS respiratory centers, resulting in central apnea.

Methods: Wistar rats received prophylaxis with either normal saline (controls), atropine, the peripherally acting anticholinergics glycopyrrolate (GLYC), ipratropium bromide (IB) or the CNS respiratory center attenuator diazepam. To determine if a dual CNS/peripheral cholinergic mechanism is responsible for

animal death, two additional groups received combination treatment with diazepam plus either IB or GLYC. All treatments were completed 5 min prior to OP with subcutaneous dichlorvos. Differences in 10-min and 24 hour mortality were assessed by Fisher Exact Test.

Results: Dichlorvos poisoning resulted in profound fasciculations without obvious seizure in all cohorts. In controls and animals treated with peripherally acting anticholinergics alone, fasciculations were followed by sedation and respiratory arrest (0% 10-min survival in all cohorts). In contrast, pretreatment with either atropine or diazepam significantly improved 10-min survival (100% and 44%, respectively). Although the peripheral agents GLYC or IB afforded no protection when given alone, when delivered in conjunction with diazepam the combination significantly improved survival (both groups 88% at 24 hours), suggesting a dual CNS/pulmonary muscarinic mechanism of lethality.

Conclusion: Peripheral anticholinergics had no effect on acute OP mortality, while central respiratory anticholinergics were protective. However, peripheral anticholinergics were highly protective when combined with the central respiratory depressant diazepam.

THE CLINICAL PHARMACIST IN THE A&E DEPARTMENT: IMPROVING MEDICATION HISTORY RECORDING AND IDENTIFICATION OF DRUG RELATED PROBLEMS

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Objective: To determine the incidence of drug related problems (DRP), and completeness of medication history taking in the Accident & Emergency Department, and to compare the differences in recording between doctors and clinical pharmacists.

Methods: The study comprised two phases. Phase 1 was a prospective study undertaken over a 3-month period for all acute admissions attending Monday to Friday during working hours of the clinical pharmacist (10.00-19.00). Medication histories were assessed for all admissions by the pharmacist and questionnaires completed for patients whose medication histories were incomplete or patients with DRP's. Data was collected using a structured questionnaire devised by Clark et al. (1). This was followed by a retrospective study (Phase 2) to compare the recording of DRP's and medication histories prior to the pharmacist's appointment.

Results: In the Phase 1 study, out of a total of 531 admission, 203 (38%) questionnaires were completed. Of these, 98.5% (200) were completed by the pharmacist, 1% (2) by doctors and 0.5% (1) by a nurse. The pharmacist completed medication histories in 87.5% (175) of questionnaires and identified DRP's in 12.5% (25) of questionnaires. >From this study the incidence of drug-related problems in patients attending A&E is 5.2%, which is similar to previous studies. (2,3) In the Phase 2 study, there were no DRP's recorded by doctors. Complete medication histories were recorded by the doctor's in 12% of cases compared with 100% of cases by the pharmacist. However, doctors recorded all drug names in 61.5% of cases compared to 100% by the pharmacist.

Conclusion: This study confirms that the recording of DRP in patient's presenting to the A&E departments and that the incidence of complete medication history is low in the absence of a pharmacist. Previous studies have highlighted the importance of both these factors in patient care (2,3). This study clearly shows significant improvement in recording of both interventions and it is concluded that the presence of a clinical pharmacist in A&E benefits patient care.

DOES LEAD CONTAMINATE ROMANIAN MOONSHINE?

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The non-commercial production of distilled alcohol products (moonshine) is often done using low quality equipment with sub optimal techniques. Methods such as these enhance the potential for accumulation of toxic impurities, primarily methanol and lead. A previous analysis of an unregulated Romanian distilled spirit known as Tsuica (pronounced Tsweeka) demonstrated significant, and sometimes life-threatening, quantities of residual methanol. For this current investigation, we sought to characterize the content of lead present in Tsuica samples.

Methods: Over a one-month period, we prospectively collected Tsuica samples from individual home-distilleries throughout Mures County, Romania. The samples were then transported to a reference laboratory in the New York City for gas chromatographic analysis of their ethanol content and atomic absorption spectroscopy for lead and other metals.

Results: 31 individual distilleries were visited from which 35 samples were obtained. 12 of the 35 samples (34%) contained detectable lead levels with a range of 4.6 to 69 parts per billion (ppb) and a mean value of 24.95 ppb (SD 24.03 ppb). 5 of the 12 lead-positive samples (41.7%) were noted to exceed 15 ppb, which is considered the threshold of safety for drinking water by the Environmental Protection Agency (EPA) in the United States. The ethanol content ranged from 0.23 to 49 .7 gm/dl, with a mean of 26.04 gm/dl (SD 12.1 gm/dl).

Conclusion: Lead contamination existed in one-third of the Romanian moonshine sampled. Nearly half of these positive samples exceeded current safety standards, giving rise to significant potential for lead toxicity in chronic consumers.

A CLINICAL PROFILE OF SNAKE BITE CASES IN THE EMERGENCY DEPARTMENT OF A REFERRAL HOSPITAL: A STUDY OF 279 PATIENTS OVER 4 YEARS

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Snake bite is a very common healthcare problem and is an important cause of mortality and morbidity in Indian subcontinent. The species of snake commonly seen in India are saw scaled viper (Echis carinatus), Russel's viper (Vipera russelli), Indian cobra (Naja naja) and Common krait (Bangarus caeruleus). The Lyophilized polyvalent anti-snake venom available in this country is effective against all these species. Hence

not much importance is given for identification of the species of the snake.

Objective: To describe the epidemiology, clinical profile, and outcome of patients presenting to the emergency department of a tertiary care hospital with suspected snakebite.

Material And Methods: This is a retrospective review of hospital records of all patients who attended the emergency department of a tertiary care hospital between 1998 and 2002 with suspected snake bite.

Results: A total of 279 snake bite cases attended the emergency department over a 4 year period from 1998 to 2002 . Mean age was 29.62 years (range 2-80 years). More than two-thirds of the patients (71.8%) were male. Nearly three-fourths of bites (73.6%) were on the lower limbs, one fourth on the upper limbs and only one on the trunk. About two-thirds of the patients had not received any first aid before coming to the hospital. Of those who received first aid (n=107), a few had potentially harmful treatment such as oral and/or local application of herbal preparations and tight tourniquets. One hundred and seventy eight patients (63.8%) had clinical and/or laboratory evidence of envenomation. Among them, local envenomation was observed in 169 patients (94.9%), hemotoxic features in 97 (54.5%), neurotoxic features in 66 (37%) and miscellaneous features such as vomiting, hypotension, and renal failure in 80 patients (44.9%). Of the venomous bites, 22 (12.3%), 33 (18.5%) and 123 (69.1%) bites resulted in mild, moderate, and severe envenomation respectively. The polyvalent anti-snake venom (ASV) was given to 156 patients who had moderate to severe envenomation. The mean dosage of ASV administered was 13.05+/-9.66 vials (range 1-75 vials). The patients with systemic envenomation required relatively higher dosage of ASV (mean 15.6 vials). 11 patients developed anaphylactic reactions to the ASV. Other therapeutic measures used were surgical interventions such as fasciotomy and debridement (n=34), dialysis (n=27), endotracheal intubation (n=31) and ventilatory support (n=21). Ten patients died and all of them had severe toxicity. The length of stay in the hospital ranged from 1 to 31 days (mean 5 days). Most bites occurred during hot rainy season (79.2% between march and october) and in the afternoon or evening hours.

Conclusion: Significant number of snake bites were venomous in this part of the world. Many patients did not receive appropriate first aid. As venom antigen detection kits were not available, envenomation was diagnosed by clinical features and dose of the ASV was titrated depending on response to treatment. All patients with suspected snake bite need to be monitored and should not be discharged directly from the emergency department.

WEBCHARTS-AN ELECTRONIC MEDICAL RECORD, TRACKING AND PHYSICIAN ORDERING SYSTEM DESIGNED FOR AN ACADEMIC EMERGENCY DEPARTMENT

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Introduction: The University of California, San Diego has used an electronic medical record (EMR) in the emergency department for over 10 years. The original design was not anticipated to handle multiple users or a high volume that is currently seen in the emergency department. WebCHARTS is a new web-based, HIPAA compliant application that allows access to a patient management database via the Internet with secure sign on or biometric security access.

Software: The program is divided into 3 parts; a web, application and database tier. The web pages were developed in four different groups: MD, RN, Utility and Status/Tracking pages using Microsoft FrontPage and Visual Basic. The application tier was developed using JAVA, Java script, Visual basics, ASP, XML. The database tier was developed with Microsoft SQL Server and ADO software.

Hardware: The client PC is a 1.0GHZ CPU or greater with 256 Mg RAM, a graphics card with 1024x768 resolution and Ethernet card. The servers used are Compaq DL 380s. Interface Engine: Interface engine transactions were performed using HL-7 or XML.

Features: Easy to learn and use. It can be easily navigated with a 15-minute orientation. It allows for simultaneous charting on the same patient or other patients. There is physician online ordering within the system. Attending supervises orders and documents their patient encounter. A patient tracking/communication system, this allows a client to view the entire department. Digital image page is designed for storing relevant pictures. Laboratory/Radiology results and notification are interfaced directly into a chart. Demographics are captured from the hospital patient database. Dictated Consults & Radiology reports are captured. Completed charts are uploaded to the patient care information system (PCIS). A hyperlink is established for secure web-paging, digital radiography by AGFA and an EKG system by GE Muse.

Conclusion: The program is successfully running in the 2 UCSD emergency rooms.

A RANDOMISED TRIAL OF THE SAFETY AND EFFECTIVENESS OF MINOR INJURIES TELEMEDICINE

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Objectives: 1. To determine the safety of minor injuries telemedicine in comparison to current practice and a gold standard. 2. To assess the clinical effectiveness of minor injuries telemedicine using a prospective, randomised and blinded clinical trial.

Methods: A telemedicine consultation system was installed between a representative peripheral unit and its associated Emergency Department (ED). Recruited patients were separately assessed via the telemedicine link, by an on-site ED specialist and also by a general practitioner (GP) wherever possible, allowing a series of independent treatment plans, blinded to all others, to be drawn up. These were compared with a gold standard established at review to identify potential discrepancies, which were then submitted to an independent expert panel for assessment. Each patient was randomly assigned to follow one of the three treatment plans and reviewed seven days later to assess a range of outcomes related to safety, clinical effectiveness and process of care.

Results: The mean duration of a telemedicine consultation (6.0 min.) was almost twice as long as an onsite ED (3.1 min.) or GP consultation (3.4 min.) ($p<0.0001$ in both cases). Telemedicine and onsite ED consultations resulted in very similar rates of X-ray (59.2 vs. 60.5%), but significantly more patients were given a follow up appointment following telemedicine (35.8% vs. 27.5%: $p<0.0001$). GPs arranged follow-up for significantly more patients than either onsite ED or telemedicine (65.0%: $p<0.0001$). There were 73 discrepancies, with 12 significant over-treatments and 11 sig-

nificant under-treatments. No consultation modality was found to be clearly better or worse than any other, and the outcomes measured at seven days showed no significant differences between the three groups.

Discussion: These results indicate that minor injuries telemedicine is feasible and has a safety profile similar to conventional practice. No difference was detected in a wide range of clinical outcome measures, regardless of the treatment plan followed. Nevertheless, telemedicine consultations took significantly longer, occupying the time of senior medical staff, and were not universally successful, suggesting that where minor injuries telemedicine is adopted alternative arrangements may also need to be established.

A PILOT BASIC HEALTH INFORMATION AND VACCINATION REGISTRY: USING INTERNET BASED ELECTRONIC HEALTH CARE RECORDS IN EMERGENCY MEDICINE

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Accessing old records in the emergency department (ED) is often difficult, especially out of hours or when patients are unable to provide information. We have developed a pilot system to store patients' basic health information online using the information exchange framework of the World Wide Web and the almost ubiquitous Internet browser. The system would act as a 'data warehouse', accessible by all registered healthcare providers, including general practitioners and emergency physicians. The resultant system provides a secure facility for users to log in using any Internet connection and search for a patient's record.

The system then presents the record, including immunisations, allergies, primary carer data and other information. Any registered user may update the system with new information such as immunisations administered. The system is modular in design, scalable and would facilitate the storage of any electronic data such as images or old electrocardiograms. An example of use in the ED is the availability of tetanus immunisation status. Tetanus is a disease with high mortality but is preventable with proper use of tetanus toxoid (TT) and human tetanus immune globulin. When deciding whether or not to administer TT, information regarding previous vaccines is not always readily available.

We assessed recall of immunisation status using a questionnaire. The responses showed that patients' recall of previous vaccines was unreliable. In a population of mainly 18 to 28 year-old university students 19.7% could not remember whether they were covered by TT. 52.2% of respondents believed they were covered, 27.6% felt they were not. Using the system, a patient's immunisation status would be readily apparent, facilitating appropriate management. Any vaccines administered could also be recorded online.

Summary: Internet-based patient records could provide ED staff with a range of useful and timely information about the patients they are treating.

THE EFFECTS OF A COMPUTERISED TRIAGE SYSTEM ON A&E DEPARTMENT WORKLOAD: OUR EXPERIENCE

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Background: Triage is a systematic process of assessment of patients upon arrival to A&E in order to classify them according to their urgency, which allows to prioritise them in order, so that the more seriously ill or injured are seen first. The Manchester Triage System (MTS) was introduced in the UK in 1996 and it is now widely used in the majority of A&E Departments. It establishes 5 categories: 1, immediate or red; 2, very urgent or orange; 3, urgent or yellow; 4, standard or green; 5, non-urgent or blue. Each category has a target time for the patient to be seen: 0, 10, 60, 120, 240 minutes.

Objectives: To present our experience with a Computerised Triage System (CTS).

Methods: The CTS is based strictly on the MTS, reflecting all its categories and target times. It was introduced in our A&E Department on the 1st January 2001. Prior to that date the MTS was performed in a manual fashion. Study periods and groups: Year 2000 (control group: manual triage) vs. year 2001 (study group: computerised triage). Waiting times: We have analysed the time from arrival to A&E until seen by a doctor ("time to be seen") and percentage of patients seen within 1 hour.

Results: The number of patients seen in A&E with times appropriately recorded was 46304 in year 2000 (control: manual triage), 46971 in year 2001 (study: computerised triage). Waiting times: The mean "time to be seen" was 92.08 minutes in control group and 82.95 minutes in study group (statistically significant at $p < 0.001$). The percentage of patients seen within 1 hour was 44.18 % in control group and 50.21 % in study group (statistically significant at $p < 0.01$).

Conclusions: Triage is a useful tool in A&E Departments to classify patients in order of priority. The CTS makes the triage process easier and more effective, improving the time from arrival until seen by a doctor and increasing the number of patients seen within 1 hour.

EFFECT OF PDAS ON EMERGENCY MEDICAL PRACTICE: PATIENT & PHYSICIAN PERSPECTIVES

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Study Objective: Rapid retrieval of concise medical information is an integral part of emergency medicine. The purpose of this study was to determine whether patients welcome the use of handheld devices (PDA's) and whether there was an inverse relation between years of practice and PDA usage.

Methods: Data were obtained from a large, academic hospital's emergency department. On pre-selected days, physicians were shadowed by a research assistant for an eight hour period. All patients who were able to provide informed consent were provided with a one page survey immediately following their physician encounter. The survey instrument asked whether the patient felt more or less confident in the care that their provider utilized. In a prospective, cross-over

fashion, each physician provided care both with and without their PDA devices. Time of care, information retrieval time, and source of information were all recorded. A total of 321 patients were enrolled and all physician providers completed the study.

Results: A majority (86%) of patients welcomed the use of PDA devices. No patients had the impression that PDA usage correlated inversely with competency. A majority of physicians welcomed the use of PDA's (76%), but only a minority of experienced providers actually utilized their PDA devices during their observation period. However, of this minority were some of the highest users. Physicians accessed electronic resources more frequently than text-based resources, but both were quite low (28%, 17% respectively). Drug information, dosage calculation, and disease management information were the most frequent reason for PDA access.

Conclusion: A majority of patients welcome the use of handheld devices for information retrieval. Less experienced physicians accessed their handheld devices with increased frequency, but a small minority of experienced providers regularly utilized PDA's.

INTERNATIONAL EMERGENCY MEDICINE RECORDS: DIGITAL DATA ENTRY, REDACTION, AND AUTOMATED TRANSLATION

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Introduction: The University of California San Francisco-Stanford Medical Informatics Project has developed a software methodology (OMEGA) for data entry, redaction, and automated translation of international emergency medical records. The methodology employs clinical record archetypes, and coding of vocabulary by open source terminologies (ICD-9). Research applications include Indo-European (Spanish and German), ideographic (Chinese), and Semitic languages (Sephardic and Arabic).

Methods: The domain of emergency medicine was parsed by (1) local or systemic symptoms, (2) the presence of trauma, and (3) final disposition. 46 templates defined archetypical presentations. From 8/1999 to 7/2003, 2819 complex patients who met the two highest levels (5 and 6) of the American Medical Association CPT coding standard, were evaluated in the Division of Emergency Services at UCSF, with data processing performed by OMEGA.

Results: (1) Project software produced a capture rate of 99.6% of complex chart representations, with a range of 96.9% to 100% on a monthly basis. (2) The ratio of charts that required more than the redacted format of 34 KB (2 single spaced pages) was 0.0036. 3 or fewer charts per annum exceeded the redacted format. (3) Software charting yielded a 70.5 % improvement in level of documentation (37.5% at level 5 and 6, versus 22% by the control group using conventional methods). (4) For the selected languages, meaning was conserved via automated translation (100%), with non-colloquial expressions occasionally detected by a control group of bilingual physicians.

Conclusions: (1) Digital data processing and automated translation of complex, international emergency medicine records can be accomplished for a significant percentage of records (99.6%). (2) Because this process can be performed with ubiquitous software applications, the potential exists for significantly improving documentation, reducing costs, and facilitating international patient care.

TO TRI OR NOT TO TRI, THAT'S A QUESTION…FOR COMPUTERS!

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Triage (Tri) becomes common use in disaster and emergency medicine. Classifying patients might be a life saving procedure in times of overcrowding emergency departments (ED). While disaster management is a time limited event, running an ED is a 24/7 occupancy. The decision to use a permanent triage system has costly repercussions when there are large periods of lower medical activity. Purpose. To find out whether it is worth to introduce a permanent triage system in our ED, based on data gathered by our information system.

Materials and methods: In 2001 and 2002, all patients arriving in the emergency department were automatically timestamped when entering the information system and when transferring them from the waiting room (Twait) to a treatment room (Ttreat) in the ED. Mean waiting times (Ttreat-Twait) and total admissions were calculated daily. In our theoretical model, we can guarantee an equal mean daily waiting time, until we reach a daily admission saturation point (DASP). The curves (daily admissions versus mean waiting time) were constructed for both years to evaluate the theoretical model. The DASP was calculated for both years as well as the frequency of days exceeding our DASP.

Results: The shape of the calculated curves was equivalent to the curve of the theoretical model. The curves for 2001 and 2002 were identical. The DASP was at 62 patient admissions per day. Both years revealed a mean waiting time before the DASP of about 7 minutes. The DASP was exceeded in 36% of time. Discussion. We decided not to introduce a permanent triage system yet. We will evaluate a cheaper solution in the same way after implementation.

Conclusion: We developed a model that gives the opportunity to make structural decisions based on the evaluation of waiting times in the ED. This model might be applicable to any ED that works with an information system with automatic timestamping capabilities for all patient procedures.

SIMULATION AND THE FUTURE OF MEDICAL EDUCATION

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Medical simulation has been comprehensively incorporated into the primary training curriculum of a large-scale training center for the first time. Since November of 2002 the Department of Combat Medic Training has graduated 2322 students and is now programmed to train 7140 students each year. Microsimulation (PC based simulations) and macrosimulation (full-scale simulations using manikins or parts thereof) have emerged as the leading technology for delivering medical skill

acquisition, performance enhancement, skill decay metric and quantitative performance and program evaluation. The first introduction to macro-simulation occurs in the 42 classrooms in the department. Each room holds sixty students and each classroom has a patient simulator (PS). The PS is utilized for initially for demonstrations and after orientation to the PS for active class participation and testing of knowledge gained each lesson. The next step in the students training is the progression to complex simulation.

There are 12 PS labs containing 8-12 simulators on which students are trained on critical tasks including airway management, hemorrhage control, medical and trauma emergencies and patient assessment. Focusing on the unique needs of combat medicine and employing an end user centered design approach we developed the students final lab simulation, simply know as "the bleeding lab." These labs consist of the equipment that would be available to a combat medic in a battalion aid station in a combat environment. The final stage in the medical simulation curriculum is a tactical demonstration in the field environment.

We developed rugged, portable, deployable complex macro-simulators that are placed in the final exam, field environment phase, that tests the critical skills taught in the prior fifteen weeks. The Department of Combat Medic Training has successfully demonstrated a curriculum incorporating simulation as a primary teaching modality through all phases of training. While this curriculum is aimed at the combat medic, we feel that this course demonstrates the viability of integrated simulation and this system can be adapted and expanded to all levels of medical training from first responder to physician.

DEVELOPMENT OF AN INTERNET, CASE-BASED, CONTINUING MEDICAL EDUCATION (CME) PROGRAM IN EMERGENCY MEDICINE

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Objective: CME programs that offer increased teacher-learner interaction may increase learner satisfaction and physician performance. Online, case-based CME courses for emergency physicians may be more interactive and convenient compared to some traditional CME formats.

Methods: A volunteer focus group was recruited to access initial acceptance and general effectiveness of a case-based emergency medicine courses intended for Emergency Medicine practitioners. Four courses in the following topics were developed: trauma, toxicology, cardiac emergencies and nuclear, biological, and chemical weapons. A locally developed content engine - Virtual Patient - was used to organize and post content for individual cases that when taken together comprised a course. The use of multimedia content, including figures, diagrams, digital photographs, digital radiographs, and audio & video clips was emphasized. Multiple choice questions (MCQ) were embedded throughout each case, in the context of the clinical presentation to access user competence with the clinical material being presented. The MCQ format allowed for instant feedback as well as explanation of answers. Hyperlinks to additional resources and digital references to the National Library of Medical, Medline online search engine were provided. Results: A volunteer focus group comprised of practicing Emergency Medicine physicians were satisfied with the case based format as well the online medium through which they experienced the content. Specific comments included praise for inclusion of multimedia content and general acceptance of the Internet as an effective medium for instruction.

Conclusions: An Internet based content engine can be used to present case-based CME courses. The online medium offers significant opportunity for enhanced interactivity and convenience compared to traditional CME formats such as didactic lectures. Future directions for this project include comparing content retention through cohort studies.

WEB-BASED ASYNCHRONOUS ROLE PLAYING GAME (RPG) FOR EDUCATION AND TRAINING IN DISASTER MEDICINE (DM)

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Computer based Role Play Games (RPGs) are characterized by a set of 'virtual' individuals whose personalities are adopted by the players usually competing for power, influence and resources within a common environment. The interactions are usually real-time based.

We propose an asynchronous, web based RPG devoted to training in DM, (called Spheeg Island), a virtual environment where reality-based disaster situations happen allowing participants to be engaged in specific roles within the island's virtual area. None of the Game mastering activities is based of Artificial Intelligence computer algorithms: the Game Master are MDs expert in DM who coordinate the group of worldwide players, enrolled within the European Master in DM classroom. Since the main focus of the game is learning medical techniques, the fact of having a real person mastering the game is not a limitation but a precise choice. In order to produce a visually appealing and functional RPG, leading technology Macromedia Flash has been used to produce a graphical user interface for the game.

Two different user interfaces have been produced (for the master and for the players). These interfaces interact with a Web-based server (implemented in PHP) that uses a database to store the data used by the game. The RPG is realized as the integration of four different components: A message board, used by players to interact within the group and with the game master. An interactive map is used to show where on the island something is happening. The master has the possibility to add some new icons to represent where a new event has occurred. Since only the master is allowed to place icons on the map, players must ask him to place a particular resource in a specific point using the message board. A status board simply shows the status of the island. It is used to visualize the number of citizen, the number of available resources, the overall condition and other similar information. A movie archive, it can be accessed by the players to view the movies unlocked by the master up to that time.

In this way the archive can be used by the players for two main tasks: view the nature of a new event that has occurred and keep track of the history of the island. All the messages and data are stored in order to allow an easy revision of the game history, after the game is over.

WEB-BASED ECG EDUCATIONAL DATABANK FOR EMERGENCY MEDICINE

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Emergency Physicians must be capable of interpreting ecg's in order to make rapid appropriate patient care decisions. All EM residency programs teach residents ecg interpretation. We developed a database of 330 high quality 12 lead ecgs, along with clinical scenarios and verified interpretations / teaching points. The database was developed as a collaborative, paper-less, internet-based project involving over 60 EM program directors. Members worked on a steering committee, as authors of clinical scenarios and interpretations and as editors and managers.

Two levels of editors, for content, reviewed each submission. Members certified to read ecgs, reviewed and approved all submitted interpretations. All assignments were made, and completed by members logging onto the web site, with individual usernames and passwords. Communication between authors and editors took place primarily by email, with auto-notification of completion of tasks. Database managers tracked completion process with built-in database reporting. All ecgs were obtained from the original patient data file of voltages recorded by the ecg machine. An Excel macro computes a data set containing 2.5 seconds of each of the 8 stored leads and derives the additional 4 leads. A JAVA applet plots the ECG in a browser window, from this data set, along with a red grid background. Each ecg is coded with one or more abnormalities or findings according to a novel classification system.

The resulting database is searchable by abnormality. Collections of ecgs from one patient over time, or grouped into logical sequences to constitute 'lessons' are also identified and retrievable. New ecgs, and new collections may be added over time. In addition, curriculum modules have been developed using this resource. All US programs have access to the database. Stored ecgs may be incorporated into documents for handouts and exams, or captured and pasted into slide (PowerPoint) lectures. A demonstration will be provided.

INFLUENCE OF AN INTERACTIVE CD-ROM ON THE DECLINE OF BLS PRACTICAL SKILLS

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Decline of resuscitation knowledge has been shown over a period of six months. The aim of the present study was to evaluate whether the use of an interactive multimedia CD-ROM (JUST project) enhanced the retention of BLS factual knowledge six months after the course in comparison with written text.

Methods: 70 trainees (46 Red Cross volunteers & 24 nursing students) who had never participated in a BLS course were recruited. Following a 6-hour ERC BLS course the factual knowledge of students was evaluated by a 10 questions MCQ test (MCQ-1). After the course students were randomly allocated in 2 groups to receive educational material: written text (group A), specially designed multimedia CD (group B). All trainees were evaluated six months later using a different MCQ test (MCQ-2). To assess whether the level of general BLS knowledge influenced trainees performance, an MCQ test (MCQ-0) was given before the course. Statistical comparisons were performed using the Wilkoxon sign rank test for paired data and the Mann-Whitney test for unpaired data.

Results and Discussion: The MCQ-0 pre-course test showed that all trainees started from the same level of BLS knowledge. There was no difference between groups A and B and also between volunteers and nursing students. Both groups performed similarly at certification (MCQ-1) and 6 months follow-up (MCQ-2) tests. However, trainees of group A showed improvement of their MCQ scores ($p < 0.02$), in contrast to those of group B who showed retention but not improvement six months after the course. The subgroup of volunteers who received the text (group A-volunteers) showed significant improvement ($p < 0.02$) of knowledge in contrast to group A-students. Gender did not influence trainees performance in either group.

Conclusions: Trainees who had access to the written text achieved better scoring on factual knowledge testing 6 months later in comparison to trainees who used an interactive multimedia BLS CD.

ANALYSIS OF ALTERED MENTAL STATUS IN THE EMERGENCY DEPARTMENT

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The purpose of this study was to determine the incidence, presentation, outcome and etiology of Altered Mental Status (AMS) in adults an emergency department (ED) population. The study is conducted on the patients admitted to the emergency department of Erciyes Medical School in Turkey. Retrospective review of the medical record was performed in a university hospital among ED patients with AMS. Seven hundred ninety adult patients with AMS admitted to the emergency department between 1995 and 2000.

Four hundred and fourteen (52.3 %) patients were male and 376 (47.7 %) female. Seven hundred ninety patients (0.6% of the ED patient volume) were identified with a mean age of 54 years (±18.3). It was as observed that 372 patients (47 %) were older than 65 years. The most common discharge diagnoses accounting for AMS were neurological (n: 566; 71.6%) and head trauma (n:82; 10.4%), followed by endocrine/metabolic (n:48;6.1%), cardiovascular/ pulmonary (n:49;6.2%), toxicological causes (n:12;1.5%), infectious (n:30;3.8%) gynecologic and obstetric (n:2; 0. 4%).

Descriptions of the AMS included 40% deep coma, 14% stupor , 26% confusion and lethargic (not alert and oriented to person, place and or/ time), 20 % agitated . Sixty-four percent of the patients were admitted with a median hospital stay of 6 (1-90) days and 36.2 % (n:286) deaths. The most fetality cause was norologic origin (n:213; 26.9%) most of them was intracranial bleeding.

BRAIN ABSCESS IN MEDICAL MALPRACTICE LITIGATION ALLEGING DELAY IN DIAGNOSIS – A REVIEW OF FOURTEEN APPELLATE CASES AND ONE STATE SUPREME COURT CASE EXTRACTED FROM THE LEGAL QUAGMIRE

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Brain abscess is a diagnosis easy to miss and difficult to make due to both its uncommon occurrence and its non-specific presenting symptoms. Yet, the clinical outcome of patients with this rare lesion depends largely upon timely diagnosis and aggressive medical/surgical management. Precipitous deterioration with catastrophic sequelae may follow missed or delayed diagnosis, and eventually result in malpractice litigation. A search of published appellate court decisions yielded 14 medical malpractice cases, in which clinical facts were available, alleging error in delayed diagnosis or treatment of brain abscess. One of these cases reached the State Supreme Court. Salient features of these cases were reviewed and summarized. Most of these patients were adult (11/14) and male (11/14). Relevant clinical history in these patients included minor non-penetrating head trauma (2), recent stroke (2), recent surgical procedures (4), new onset seizure (3), headaches (2), and renal dialysis (1). Half of these patients eventually died from the brain abscess (7/14), and the others suffered severe neurological dysfunction. Surprisingly, in most cases (10/14) the trial courts found in favor of the defendants. The appellate courts affirmed most (9/14) of the lower court decisions — 6 out of 10 for the defendants and 3 out of 4 for the plaintiffs, ironically resulting in 7 appellate decisions each for the defendants and the plaintiffs. Notably, in all 5 cases where the appeals court reversed the trial court decisions, grounds for reversal involved improper actions of the trial court judges. Finally, in the lone State Supreme Court case, the trial court found for the plaintiff, then the appellate court affirmed, but the State Supreme Court reversed in favor of the defendant physicians on the grounds that causation for medical malpractice had not been proven. In the legal quagmire, the outcome of medical malpractice litigation remains unpredictable at best and capricious at worst.

LIFE THREATENING HYPERTHERMIA IN OLD AGE, BETWEEN ISCHEMIC STROKE AND HEAT STROKE

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Introduction: Hyperthermic events from thermoregulation disturbances occur especially in the case of old people and children, under particular conditions of environment, physical effort, constitution and pathological context. They may cover various and severe aspects. The paper aims to analyze the connection between ischemic stroke and heat stroke, which can be seen under certain circumstances at the patients with life threatening hyperthermia. It also aims to analyze the differentiating clinical elements in Emergency Room.

Methods: We have analyzed a group of 5 cases of life threatening hyperthermia, who were admitted in the Emergency Room in June 2003. All these patients were elderly (over 60 years old) and present a long time exposure to heat (Tc > 41*C) as well as signs and symptoms of cerebral injury, being hemodynamically unstable (BP unmeasurable, CVP < 3 cm H2O in 3 cases). In 2 of the cases, the CT examination made in 45 minutes after admission in ER has shown an extended cerebral ischemia. With other 2 patients, CT examination was made 12 hours later after the admission in ER. It has shown cerebral and cerebellar ischemia. In the case of the fifth patient, no CT modifications have been shown. Despite the permanent intensive care in ER and ICU (rapid cooling, fluids, electrolytes, ABC management) the percent of mortality was high.

Conclusions: 1. One should take into account the possibility of the simultaneous co-existence between ischemic stroke and heat stroke with the patients found in this clinical context; 2. From the clinical point of view is difficult to distinguish cerebral injury caused by ischemic stroke from the primary cerebral injury and especially the secondary one caused by heat stroke; 3. In same cases, ischemic stroke may lead to hyperthermia or it may occur in the evolution of a heat stroke as well, which can complicate the prognosis and require particular management procedures; 4. Ischemia is mostly localized in the vertebro-basilar area.

THE UTILITY OF A STROKE RECOGNITION INSTRUMENT FOR RAPID TRIAGE OF ACUTE STROKE PATIENTS IN THE ACCIDENT & EMERGENCY DEPARTMENT

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Introduction: Rapid and timely intervention is crucial for stroke patients to maximise the benefit of acute treatment. Accident & Emergency (A&E) departments are frequently the first point of contact with medical staff for acute stroke patients. Despite the recognised need to treat stroke urgently management of stroke in the A&E setting is generally given a low priority and diagnostic accuracy unsatisfactory. We designed a stroke recognition tool for use by A&E physicians.

Methods: The study comprised two phases. Phase one a prospective observational study over one year, during which the instrument was developed, using data regarding the clinical characteristics of suspected stroke patients admitted via our A&E. Phase two consisted of a prospective validation study using the instrument in a new cohort of patients admitted via A&E over a 5 month period.

Results: In the Phase 1 study 398 suspected stroke patients were evaluated (159 strokes; 178 non-strokes; 61 TIAs). Commonest stroke mimics were seizures (24%), syncope (23%) and sepsis (10%)-the 'three S'. A 7-item scoring system [total score between -2 and 5] stroke recognition instrument was constructed based on history items [loss of consciousness and convulsive fits] and neurological signs [face, arm, leg paresis, dysphasia/dysarthria, and visual field defect]. When internally validated at a cut-off score of > 0 the instrument showed a diagnostic sensitivity = 92%, specificity = 86%, positive predictive value (PPV) = 85% and negative predictive value (NPV) = 93%. External validation (Phase 2 of the study) against 79 consecutive suspected stroke referrals (49 stroke, 30 non-stroke patients) revealed 88% sensitivity, 73% specificity, 84% PPV and 79% NPV.

Conclusions: This stroke recognition instrument proved

to be a useful clinical tool for the recognition of patients with acute stroke in the A&E setting. This could facilitate rapid delivery of thrombolysis and other hyper-acute interventions to acute stroke patients presenting to A&E departments.

A PROSPECTIVE, RANDOMIZED, CONTROLLED TRIAL COMPARING THE EPLEY MANEUVER VERSUS PLACEBO MANEUVER IN PATIENTS PRESENTING TO THE EMERGENCY DEPARTMENT WITH BENIGN POSITIONAL VERTIGO

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Introduction: Benign positional vertigo (BPV) is caused by the inappropriate presence of calcium particles (otoliths) in the semicircular canals of the inner ear. The Epley maneuver, which moves the head about in such a way as to displace the otoliths back into the utricle where they belong, has been shown to be effective in specialty clinics for the treatment of BPV. There have been no studies examining the Epley maneuver specifically in emergency department (ED) patients.

Objectives: This study examines the efficacy of the Epley maneuver versus a placebo maneuver in patients presenting to the ED with BPV.

Methods: This is a prospective, randomized, single-blinded controlled trial that enrolled patients from October 2001 to August 2002. Consecutive adult ED patients at a university teaching hospital presenting with BPV were randomized to treatment with either the Epley or placebo maneuver. Severity of vertigo was evaluated before and after the maneuvers on a 10-point scale, and the changes in score were compared using the Mann-Whitney U test.

Results: 11 patients were randomized to each group. The average improvement in vertigo severity was 6.0 +/- 0.8 for the Epley group and 1.6 +/- 0.7 for the placebo group (p=0.0005). The average score 3-5 days after discharge was 0.8 +/- 0.5 for the Epley group and 0.6 +/- 0.4 for the placebo group (p=0.81).

Conclusion: The Epley maneuver is a simple bedside maneuver that is more effective than placebo in the acute treatment of BPV in ED patients.

INTERPRETATION OF TRAUMATIC LUMBAR PUNCTURES IN THE SETTING OF POSSIBLE SUBARACHNOID HEMORRHAGE: WHO CAN BE SAFELY DISCHARGED?

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Introduction: Lumbar puncture (LP) is a common Emergency Department (ED) procedure used in the diagnosis of subarachnoid hemorrhage (SAH). The presence of red blood cells (RBCs) in the cerebral spinal fluid (CSF) is diagnostic for SAH. Objective: The goal of this study is twofold-to determine whether a CSF RBC cutoff value exists that safely excludes SAH, and to compare the RBC clearance from tubes 1 to 4 between traumatic LP's and those diagnostic for SAH.

Methods: LP data was analyzed retrospectively for 554 adult patients from 1/2001 to 4/2003. Two groups (SAH and traumatic LP's) were analyzed. First, an absolute RBC count in tube 4 and percentage decrease in RBC's from tubes 1 to 4. Mean RBC counts for tube 4 and 95% confidence intervals were calculated. Relative positive and negative predictive values for SAH were calculated for the different ranges of RBC's in tube 4. Secondly, RBC clearance from tubes 1 to 4 and the mean percentage of RBC clearance was calculated. Negative and positive predictive values were calculated for the different ranges of clearance.

Results: There were 299 LP's evaluated; 288 were traumatic and 11 diagnostic for SAH. An RBC count in tube 4 of less than 500 had a negative predictive value of 100% for SAH. A tube 4 count of more than 10,000 had a positive predictive value of 100% for SAH. The mean RBC clearance from tube 1 to 4 was 80.3% in the traumatic group and 9.1% in the SAH group. The traumatic LP group had a tube 1 to 4 RBC clearance of at least 70% in 88% of the sample (125 of 142); in contrast none of the 11 SAH RBC counts cleared more than 30%.

Conclusion: In our study, a RBC count of less than 500 in tube 4 and a percentage decrease in RBC count of more than 70% from tube 1 to 4 were both strongly suggestive of a traumatic LP rather than SAH. When used in combination, these two parameters may provide emergency department physicians with a valuable decision rule for ruling out SAH.

RANDOMIZED DOUBLE-BLIND COMPARISON OF PRILOCAINE VERSUS PLAIN AND BUFFERED LIDOCAINE FOR LOCAL ANESTHESIA IN LACERATION REPAIR

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Objective: To compare 2% prilocaine plain solution (PRL) to 1% lidocaine hydrochloride (LDC) and buffered lidocaine 1% (B-LDC) regarding both effectiveness of local anesthesia and the pain of injection in laceration repair.

Methods: A double-blind randomized prospective comparison study of three agents i.e., PRL, LDC and B-LDC solutions for local anesthesia in simple lacerations was undertaken. The study included all consecutive adults admitted into the ED within the 18-month study period and the subjects were randomized into three groups regarding the agent used. Pain intensity by means of Numerical Rating Scale was asked to and recorded for every subject on three occasions: at the skin entry of needle (P1), immediately after completion of injection (P2) and after the first puncture of suturing needle (P3). The results of three drugs were compared.

Results: A total of 182 patients were enrolled in the study. The mean age was 30.9 ± 11.4 years (range 18 to 73) and 121 (66.4%) were male. Mean P1 scores did not differ between the three treatment groups (p=0.56, ANOVA). Mean P2 scores were the highest for PRL (24.01 ± 16.0), followed by LDC (20.91 ± 14.9) and B-LDC (16.1 ± 11.3) (p=0.007, ANOVA with post hoc Tukey tests). Mean P3 scores were the highest for B-LDC, followed by PRL and LDC (20.41 ± 16.2 vs. 18.41 ± 13.1 vs. 13.41 ± 11.3, respectively; p=0.014, ANOVA with post hoc Tukey tests). Numbers of patients who required extra drug administration were not significantly different in any of the groups (Pearson's Chi-Squared; p=0.09).

Conclusion: LDC 1% was found to provide more effective anesthesia than PRL 2% and B-LDC 1%. Among the three agents, B-LDC is the agent which inflicted the least pain on injection into the wound edges.

A COMPARISON OF THE USE OF IONTOPHORESIS AND ORAL NON-STEROIDAL ANTI-INFLAMMATORY MEDICATION IN THE PAIN MANAGEMENT OF ACUTE SOFT TISSUE INJURIES IN THE EMERGENCY DEPARTMENT SETTING

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Objective: Iontophoresis is the induction of ionized medications topically via low level electric current, commonly used in physical medicine and rehabilitation settings. This study evaluated the effectiveness of iontophoresis for the pain management of acute soft tissue injuries in the emergency department.

Methods: This was a prospective randomized study performed at a university hospital emergency department. Eligible patients were divided into control and intervention groups based on the day of the week. Intervention patients were administered ionized lidocaine via iontophoresis at the site of maximal pain. Control patients were administered oral nonsteroidal anti-inflammatory medication (ibuprofen) based on age and weight. Pain levels were recorded initially and at ten-minute intervals up to thirty minutes in both patient populations utilizing a visual analog pain scale of 0-10.

Results: The data suggests a statistically significant difference in the effectiveness of the iontophoresis treatment compared to the ibuprofen group. The iontophoresis group at 10, 20, and 30 minutes demonstrated a pain decrease of 1.73, 2.48, and 3.13 points respectively on the visual analog pain scale. The ibuprofen group at 10, 20, and 30 minutes demonstrated a pain decrease of 0.43, 0.80, and 1.30 respectively. Evaluating the two groups, the iontophoresis showed improvement in the pain response of 302%, 210%, and 141% respectively at the 10-30 minute intervals when compared to the ibuprofen group.

Conclusion: Iontophoresis is an effective and efficient adjunct to the traditional treatment in the emergency department. The results from this study have demonstrated iontophoresis to show clinically significant improvement in the pain management of acute soft tissue injuries compared to commonly used treatment in the emergency department setting.

COMPARISON OF PROPOFOL/ REMIFENTANIL COMBINATION WITH MIDAZOLAM/REMIFENTANIL COMBINATION FOR EFFICACY AND SAFETY IN PROCEDURAL SEDATION AND ANALGESIA IN CHILDHOOD

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Aim: Our aim is compare efficacy and side effect of combination of propofol and remifentanil with combination midazolam and remifentanil in order to provide sedation and analgesia.

Methods: This study included 50 patients. We administered propofol to the half of the patients (loading dosage IV bolus 1 mg/kg/2 minutes, IV maintenance dosage 50 µg/kg/ minutes) and remifentanil (loading dosage 1 µg/kg/ 2 minutes, IV maintenance dosage 0.1 µg/kg/minutes) (Group 1) and to the other half of the patients midazolam (IV bolus 0.05 mg/kg/2minutes) and remifentanil (IV loading dosage 1 µg/ kg/2minutes and IV maintenance dosage 0.1 µg/kg/minutes) (Group 2) combination. The first examination of patients was made within the following parameters: age, gender, weight and ASA scores. After physical examination at the beginning of the procedure, pulse, respiratory functions, peripheral oxygen saturation were followed and noted. Following the patients until discharge the parameters: arterial blood pressure, respiratory rate, sedation level (Ramsay Sedation Scale used), and analgesia levels (Face Scale used) were noted with minute 5 minute period. All complications and the treatments were noted.

Results: The results were compared between two groups. In Group-I diastolic blood pressure decreased more then Group-II ($p=0.010$) but the sedation proof was better then Group-II and the patients reached quicker than Group-II for procedural sedation ($p>0.050$). In Group-I recovery time was better than Group-II. We observed that hypoxia was frequent in propofol–remifentanil group was it was not statistically significant ($p=0.490$).

Conclusion: The results showed that propofol-remifentanil is better in sedation than midazolam-remifentanil combination and also more effective, and quicker for procedural sedation level. There was no difference in analgesia level between the two groups. As a result we believed that propofol-remifentanil combination could be recommended for procedural sedation and analgesia in children but the physician should be alert for hypoxia.

PROPOFOL FOR DEEP PROCEDURAL SEDATION IN THE EMERGENCY DEPARTMENT: IS THERE A LEARNING CURVE?

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Objective: Investigate the incidence of complications with increasing experience using propofol for deep procedural sedation by emergency physicians in an urban emergency department.

Methods: During the investigation of the first 100 patients to receive propofol for deep procedural sedation in our emergency department a complication incidence of 6% was noted. The current study investigates the incidence of complications in the next 100 patients. Our theory was that the incidence of complications would decrease as familiarity with the drug increased. Data was collected prospectively on the number 101 to 200 patients that had undergone deep procedural sedation with propofol in our urban emergency department. Patients were given propofol in a titrated dose at the discretion of the emergency physician until the desired level of sedation was obtained. The drug was given without regard to time of last oral intake. Vital signs and pulse oximetry were recorded during the procedure and until recovery. The nurses recorded complications. Case data and complications were recorded into a database. Hypotension of SBP < 90 mmHg, hypoxemia of pulse oximetry < 90%, respiratory depression requiring assisted ventilation or intubation, aspiration, airway ob-

struction, or anesthesia consultations were considered complications.

Results: Over the study period, patients received propofol for orthopedic reduction (30%), lumbar puncture (36%), incision and drainage of abscess (22%) and other indications (12%). Mean total dose of propofol was 150 mg (range, 20 to 600 mg). Patient ages ranged from 2 to 92 years of age. Transient hypotension (SBP < 90 mmHg) occurred in 1 patient. The hypotension responded quickly to fluid bolus and did not recur. No patients developed transient hypoxia, required assisted ventilation, required intubation, aspirated, suffered airway obstruction, or required anesthesia consultation.

Conclusion: In the first 100 patients, 3% developed hypotension and 3% developed transient hypoxia. In the next 100 patients, there was only 1 complication, which was transient hypotension that responded quickly to fluid resuscitation. This revealed a decrease in the complication rate from 6% to 1%, indicating as familiarity with propofol increased the complication rate greatly improved. The most dreaded complications of aspiration or intubation have not occurred in the 200 patients studied to date.

INTRAVENOUS REGIONAL ANAESTHESIA (BIER'S BLOCK) FOR MANIPULATION OF DISPLACED DISTAL RADIAL FRACTURES: OUR THREE-YEAR EXPERIENCE

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Distal radial fractures are one of the most common fractures seen in the A&E Departments. The majority of them are treated conservatively, however they might require reduction under anaesthesia if displaced, followed by forearm immobilisation in a plaster. Different methods of anaesthesia are available: haematoma block (HB), intravenous regional anaesthesia (IVRA) or Bier's block, regional nerve blocks, sedation and general anaesthesia. Amongst them, HB and IVRA appear to be the most common options within A&E Departments.

Objectives: To present our experience using Bier's block as a method of anaesthesia for reducing displaced distal radial fractures.

Methods Procedure: IVRA involves infusion of a local anaesthetic (Prilocaine) intravenously into the forearm, after draining the venous blood and applying a cuff inflated 100 mmHg above systolic blood pressure. Inclusion criteria: Patients with displaced distal radial fractures. Outcome measures: Anatomical restoration (Sarmiento score), need for remanipulation, pain scoring (visual analogue scale).

Results: >From 01/01/2000 to 30/06/2003, a total of 4048 patients with distal radial fracture were treated in our A&E Department, 169 patients (4.17%) with displaced fracture underwent manipulation under Bier's block anaesthesia. Anatomical restoration: With the Sarmiento score, reduction was classified as excellent in 29 patients (17.16%), good in 101 patients (59.76%), fair in 33 patients (19.53%) and poor in 6 patients (3.55%). Remanipulation was required in 11 patients (6.51%): immediately in 6 patients (poor reduction), at a later stage in the remaining 5 patients (3 with good and 2 with fair reduction) due to displacement during follow up. The mean pain score was 1.8. No adverse effects were encountered.

Conclusions: Bier's block is a simple, safe and effective anaesthetic technique. Bier's block represents a valid option for the management of displaced distal radial fractures in A&E.

INTRAVENOUS REGIONAL ANAESTHESIA (BIER'S BLOCK) FOR MANIPULATION OF DISPLACED DISTAL RADIAL FRACTURES (PART II): PRESENTATION OF A VIDEO

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The objective of this presentation is to show a video which demonstrate in detail the practical execution of intravenous regional anaesthesia (Bier's block). Methods: Video of short duration, which shows how to perform Bier's block from a practical approach, safely and effectively. Bier's block involves intravenous infusion of local anaesthetic (Prilocain) into the injured forearm, after draining the venous blood and applying a double cuff inflated 100 mmHg above systolic blood pressure. First of all an intravenous access is obtained in both, injured and normal arms by insertion of a cannula into a vein on the dorsum of both hands. The injured limb is then elevated for a few minutes and is well padded with velband. A double cuff is placed around the upper arm, which is inflated to a pressure of 100 mmHg above the systolic blood pressure. Then this limb is lowered and 0.5 % plain prilocaine at a dose of 3 mg / Kg (maximum 50 mL) is injected slowly.

In this way the local anaesthetic cannot pass to the general circulation, although it can diffuse from the intravascular compartment of forearm to surrounding tissues including nerve endings. The fracture is manipulated 10 minutes after injection. Following manipulation a padded plaster back slab is applied. The cuff is deflated after at least 20 minutes (ideally 25 minutes) from the time of prilocaine injection. Finally X-rays are taken to check the position.

DISASTERS AND ECONOMY

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Disasters are widely defined as the impact of abnormal or infrequent natural hazards on communities or geographical areas which are vulnerable to such hazards, causing substantial damage, disruption and possible casualties and leaving the affected communities unable to function normally. Global statistics on disasters seem to indicate a significantly higher frequency of natural disasters in the third world than in the industrialized countries.

Recent estimates of economic costs associated with these catastrophes are astounding—the costs continuing to skyrocket in an unanticipated manner. Estimates of economic costs associated include 5 billion US dollars for the Kobe earthquake and 30 billion US dollars for Hurricane Andrew in Florida in 1992.The Northridge earthquake cost the United States in excess of 15 billion US dollars and these cost estimates do not include the aid provided by external governments, UN agencies and NGOs that provide humanitarian assistance during the acute and reconstruction phases of disasters, nor do they include those costs associated with loss of production. Despite a general recognition of the importance of estimating the economic impact of natural disasters little progress has been made on developing a robust methodology for the use in the field. This has compromised the possibility of establishing disaster preparedness and prevention programmes that require economic justification.

This paper highlights some of the inadequacies of the cur-

rent assessment practices and recommends the development of a universally acceptable methodology that would provide timely, reliable and comparable assessments of the impacts of different disasters. A universally acceptable format would have to take into consideration three important areas: 1.Collection of valid, accurate and comparable data on economic impact. 2.Clear definition and methodology for estimating costs. 3.Standard recording and reporting procedures.

FIELD TRIAGE DRILLS WITH VOLUNTEERS

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Objectýves: Emergency Medicine Association of Turkey (EMAT) has a disaster team. This team includes emergency physicians, nurses, paramedics and volunteers that have completed Basic Life Support Courses. The group was first established after two devistating earthquakes experienced in 1999 in Turkey. The team members are all trained about triage organisation. The objectives of the field triage drills were: (1) To train the team (2) To develop a standard approach to the disaster victims and injured people, (3) To teach the team members, colors and details of the triage tags.

Methods: The field triage drills were performed at the Izmir City Municipal Grounds on the 17 th of August 2000, Istanbul, Bursa and Ankara on the 9th of June, 13 th of November 2001 and 16 th of March 2002 respectively. During these drills, 100 EMAT members acted as wounded and 45 EMAT Disaster Team Members worked at one of the following: Disaster site, triage area, red, green, yellow, black areas, ambulance and ERs. Out of 100 wounded, 60 were sorted as green, 20 were yellow, 5 were red and 15 were black. The wounded people were asked to act as if they had the problem that was already told them before the drill. The whistle indicating the beginning of a significant earthquake was blown at 6:00 PM. Right after the announced earthquake, the injured people went to the disaster site. The first group with paramedics and first-aid volunteers started triaging the 100 injured people and looking for the "reds" according to the Simple Triage and Rapid Treatment (START) system. After this they performed first-aid for those who needed and transported them to the triage area for a second evaluation. At the triage area, the triage officer who is an experienced emergency physician, controlled the triage tags and decided which goes to the red, yellow, green or black areas. The patient's identification info was writen on the triage tags, red and black labeled patient's photos were taken. The red and yellow sites were constructed right behind the triage area. The ambulances were located close to the triage area; were used to transport the red tagged first with the yellows later.

Results: The disaster team of 45 volunteers practiced their knowledge and skills of triage organisation. The disaster area with 100 patients was cleared and it took the paramedics with the first-aid volunteers 9.4, 9.0, 9.5, 9.5 minutes respectively to transport all patients to the triage area. The triage area was clear after 24.3, 17.0, 18.0 and 21.0 minutes. The ambulances transported all the red and yellow taged patients to the Emergency Room, starting with the red tagged ones. There were no missed diagnosis. By the way the volunteers performed, we perceived that the volunteer disaster team is ready to perform triage in a real disaster.

DISASTER MEDICINE – EMERGENCY PLAN FOR THE MASS GATHERING DURING "IL PALIO" IN SIENA

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The "Palio" of Siena is a horse-race which is celebrated twice each summer (2.7. and 16.8.); its peculiarity consists in the fact that the horses run, since 1147, in one of the most beautiful town squares in the world, the shell-shaped "Piazza del Campo". The culminating moment (the horses' race) of the Palio is very brief, no more than a minute and a half. It is in the meanwhile a sensual feast and a mass gathering event, involving almost all of the 50-60.000 citizens of Siena and tourists in a small place of 6.000 square m. This race is both spectacle and serious business. The official reason to run the Palio is thanking the Madonna but in fact it represents a vestige of ancient Italian rivalries.

The aim of this abstract is: - to show how a middle age town like Siena could be able to apply an accepted emergency management structure for control and coordination arrangements normally defined by legislation to the organizations that exist in community. - to optimize the planning and the support of emergency medical dispatch due the mass gathering during "Il Palio" of Siena. - to detail the emergency managements for a mass casualty during "Il Palio" expressed as a verification of the coordination among Department of Civil Protection - Prefecture - Mixed Operative Centers (MOC) - Towns Mayor. Between Fire Department and EMS 118 - Armed Forces and Public Assistance Agencies - Natural Health Service - Volunteer Organizations. > The plan: > The emergency plan for the mass gathering in "Piazza del Campo" prescribes the triggering events for activating the plan, who can activate the plan and under what circumstances (Emergency Assessment process). > The plan shows, checks and evaluates the security system of the timesquare (Hazard analysis, technical point of view, computer simulated ways to escape) and the medical emergency system (medical dispatch center, role of the coordinator, number and location of physicians, nurses, volunteers, triage officers). > The plan defines the type and the location of the rescue vehicles on the spot, the ways for evacuation. > The plan develops the operative interventions protocols in collaboration with the management systems for response (activation and implementation of operational systems like Medical Dispatch Center) and recovery (communications, search and rescue, health and medical, social welfare, transport and lifelines, policy and security) and the information management (public information). > The plan presents an technical map of the time square and a special map of Siena.

Conclusion: In spite of the peculiarity of the "Piazza del Campo" square which is small and surrounded by a fence during the horse-race, in case of mass casualty event the emergency plan and the cooperation among the different above mentioned organizations involved in the management of a mass casualty event could allow triage to be efficient and people to escape the square quickly and safely.

TERRORISM IN SPAIN: ANALYSIS, ONGOING DATA BASE AND REGIONAL PREPAREDNESS PLAN

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Introduction: In Spain, since 1968, the terrorist band ETA – under a flag of liberal movement for the Pais Basque – , has been commiting terrorist acts until nowdays.This group acts in different ways, but when the target is a massive one, they usually announce it in advance indicating when and where it will take place to goverment forces or media. Sometimes a second car blasts later in another place. The EMS are not usually neither involved in the preventive phase nor getting into alert when terrorists warm of an imminent explosion.

Objectives: 1. Analyze ETA activity since the truce end (period 2000-2003). 2. Proposal of a regional terrorist preparedness plan in Madrid which incorporate the EMS. 3. Create an ongoing data base of terrorist acts for researching purposes.

Methodololgy: Retrospectiv study, with a descriptive analysis of ETA crimes. Design of an specific data base.

Results: 1. Since 2000 ETA has caused 38 terrorist attacks with 46 letal victims: 19 by car blast, 16 by gun shots and 3 by explosive bags. 2. In 22 attacks 48 people resulted injured and in 31 no one were injured. After 11 bomb car outrage a second car (the scape car) blasted. 3. 7 ETA members died while manipulating explosives. 4. In spite of warning in 20 cases, one turned out death and 13 injured (7 belonged to TEDAX). 5. The most affected county was the Pais Basque, followed by Madrid. From the death victims 23 belonged to the military and policial corps; 12 were politicians; 3 journalists; 3 judges or lawyers; 1 businessman and the rest civilians.

THE MUNICIPAL PLAN OF EMERGENCY IN DISASTER PREVENTION THE CASE OF OAXACA STATE (MEXICO)

PEREZ-RINCON MERLIN E

Mexico

During the last century, disaster prevention has become the focus of attention in emergency administration. One must know clearly and accurately the possible effects of a disaster, and who commands the responses in case of emergency. This can aid the civil defense authorities and the general population in developing specific mechanisms that reduce the impact of calamities.

Municipal Plans of Emergency, also known as Municipal Plans of Contingency (MPC), develop community protection actions and include action organizations, services, people, and resources available to respond to disasters. It also includes the identification of specific risks, community preparedness, local response capacity, risk planning, and establishment of the structural organization (authorities, agencies, offices, volunteers) that responds to emergencies. Each element knows their respective role, what to do, what not to do, and how to participate in a team effort. MPC's oblige decision makers to make plans and execute preventative actions and emergency projects that provide effective formulas capable of improving stability factors and response mechanisms.

Social Context: The state of Oaxaca is situated in the southeast portion of Mexico and presents a complex geography that makes access to basic emergency services difficult. The state is also at high risk for earthquakes: Of the total number of earthquakes in Mexico, 40% strike in Oaxaca. Additionally, the Tehuantepec Isthmus Region occupies the first matrix point for generating hurricanes. In the rural communities of Oaxaca, longstanding governmental paternalism has created an attitude of dependence. It is thus important that mechanisms are created which increase the ability of local actors to respond to emergency situations on the basis of their own resources and organization**.**

The risks faced in countries of the first world differ considerably from those faced in those of the third world. The socioeconomic characteristics of the population in Mexico and Oaxaca, as in other underdeveloped countries, necessitate the development of an alternative model for disaster prevention. The infrastructural conditions in the south of Mexico call for social rather than technical responses to emergency situations. While in Europe and North America there exist technical emergency response teams, in Mexico the response force must derive from the strengthening of social links and the capacity of ordinary citizens. This program forms a contribution to the Mexican sense of solidarity and mutual help in the face of disaster. To promote the prevention and mitigation of the effects of natural and man-made disasters, through knowledge of the phenomenon and specific preparedness of the local authorities with action organizations, services, people, and resources available to respond to disasters.

The aim of the Municipal Plans is to establish coordinational ties between civilians, volunteers and local Government.

WHAT WAS THE PARTICIPATION OF THE EMERGENCY AND DISASTER MEDICINE PHYSICIAN IN THE MANAGEMENT OF EMERGENCY DISASTERS IN PERU PREVIOUS 10 YEARS (1992-2002)

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The objective of this retrospective work is to describe the role of the Emergency and Disaster Medicine Physician in the management of emergencies and disasters in Peru (1992-2002). Peru is a South American country with a population of 28 million, with an increasing number of all types of natural disasters and non natural disasters. Baby phenomenon (1987-88) caused 54 million dollars of loss, terrorism (1980-1990) caused 25,000 deaths and accidents in a study in 1997 caused 24,000 deaths, a snapping of the Japan Peruvian embassy because of MRTA was resolved, fire in December 2001 resulted in 280 deaths. The demographics, associations and expectancies of Peru are: expectancy of life at birth: 61.8x1000, natality: 30.9, mortality: 10.9-12x1000, morbidity: 1st infectious diseases, 10th trauma injuries, unemployment percent: 8.9%, low social level: 50% of pediatric mortality: 54-102x1000, hour work: 1-2 soles, professional hour work: 5-10 soles, 9million of indigents that immigrated, unstable political situation. To address all these issues Dr Morales Soto and San Marcos University created the specialty Emergency and Disaster Medicine. In 1996 there were 8 specialists, and now there are 80, however only 2 work outside of capital of Peru (huancavelica, essalud abancay-apurimac). We work in extrahospital and intrahospital management (triage, observation, ust), and with the ministry of health and national civil

defense. Most of the specialists were trained in the USA, Colombia, Japan, and Mexico. Most have international accreditation of ACLS, ATLS, and some belong to CGBVP, Peruvian Red Cross. We believe that the emergency and disaster medicine physician has an important role in the management of emergencies and disasters in any country. This specialty should be recognized all over the world, with continual training, sharing of knowledge, participation with all emergency societies, and we should work together preventing disasters and maintain health.

WAITING TIMES AND TRIAGE

GION G

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The ED is the first step of in-hospital emergency care. There are many patients with different diseases appearing at triage. That is a very important part of emergency care: to sort the incoming patients according to their complaints, symptoms and the possible forthcoming progression. In general we believe patients with minor illness are more common than urgent or serious cases (details in the presentation). In our new department we used the Glasgow crowd triage system. In this presentation we would like to introduce our system, with which we can hold our standard waiting time. Patients with red labels have first priority with medical attendance within 0-4 minutes. The waiting times of patients with yellow and green labels are not long (0-27 and 0-122 min.). 46% of our patients stay in the ED for 24 hours awaiting their laboratory and X-ray results before leaving the ED. There is some seasonable variance of admitted patients, but in general, the average monthly flow is around 700-900 patients on the Internal Medicine section, and 1800-2000 patients on the Traumatology section. Despite the adequate triage work, there are special hours with a high flow of incoming, mainly ambulatory patients, and the increased waiting times in that period is not tolerable to some. There are some other problems related to overcrowding of the ED. Before the ED, there was a special board, named Patient Admission Dept, which had a different function. Most family doctors believe all patients who need hospital care have to pass through this department. It is very difficult to realize the new function of the ED. In the second part of presentation I would like to present the work of our department with some data of patient flow, admission rates, and frequency of main symptoms.

AMBULANCE DIVERSION: A LONGITUDINAL ASSESSMENT OF COLLECTION PATTERNS AND DURATION IN CALIFORNIA FROM 1995-2000

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Objectives: This study was designed to evaluate longitudinal trends in the collection patterns and quantity of ambulance diversion time throughout the state of California (CA) from 1995-2000, as a function of number of emergency departments (EDs) per county.

Methods: This retrospective survey queried all CA county EMS directors via telephone to determine: 1) whether diversion time was recorded as an outcome variable during 1995 and 2000; 2) if recorded, cumulative countywide hours (hrs) spent on divert during this period; 3) number of open EDs in 2000.

Results: The response rate was 100% [56/56]; unavailable data (NA) reflect EMS-reported database corruption or inconsistent collection. Counties with 1 ED [n=13], 46.2% [6] recorded diversion time as an outcome measure in 1995 and 2000 (all as zero hrs for both periods). Among counties with 2-5 EDs [n=26], diversion status was tracked by 30.8% [8] in 1995 and 80.8% [17] in 2000 (7 and 6 as zero hrs, respectively); mean non-zero divert hrs were undeterminable in 1995 (1 NA) and 247 hrs (range 42-839 hrs; 7 NA) in 2000. Counties with 6-10 EDs [n=10] had a diversion time recording rate of 50.0% [5] in 1995 (mean 3103 hrs, range 268-6264 hrs; 1 NA) and 80.0% [8] in 2000 (mean 8668 hrs, range 46-23883; 2 NA). The proportion of counties with >10 EDs [n=7] that tracked diversion time grew from 57.1% [4] in 1995 (mean 6284 hrs, range 876-11691 hrs; 2 NA) to 100% [7] in 2000 (mean 12981 hrs, range 2086-21914 hrs; 1 NA).

Discussion: The proportion of CA counties tracking ambulance diversion as an outcome variable grew 27% between 1995 and 2000, from 41% to 68%, respectively. Counties with 2-5 EDs accounted for most of this increase, as at least half of counties with more than 6 EDs were already tracking ambulance diversion in 1995. Diversion time more than doubled between 1995 and 2000 in counties with 6 or more emergency departments.

CLINICAL INDICATORS IN THE EMERGENCY DEPARTMENT: TOOL FOR IMPROVING THE QUALITY OF HEALTH CARE DELIVERY, CHALLENGING BEHAVIOUR CHANGE, AND EMPOWERMENT

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Performance indicators can be used in Emergency Department to evaluate and improve leadership, administration, clinical and supporting processes. A set of output and outcome indicators to assessment the quality of healthy care system, Customer Satisfaction and management are reported. The whole team (physicians and nurses staff) was set up in learning program for accreditation process and in improvement quality working groups. This method rises the spur to work and the participation to Continuous Quality Improvement projects. Regularly performed clinical indicator of efficacy are: the appropriateness of urgent code attribution (from 75 to 100%); the admission rate regarding to National Triage Scale category (80% of Urgent Code), waiting time in respect to triage code (indicator 0,90 to urgent code); Emergency Department deaths audit and follow up of survivors (20% in the first 2002 semester); " Door to needle time" in acute myocardial infarction monthly recorded. The appropriateness admission/discharge diagnosis on 30 consecutive clinical records is performed monthly and submitted to audit. Clinical risk management by systematic evaluation of "sentinel" or "adverse" event. Regularly performed clinical indicators of efficiency are: the appropriateness of admission trimonthly evaluated through AEP (inappropriate admission is less than 20%); the surgery and medical DRG appropriateness and the number of patients admitted to Emergency Department, transferred to another care facility, in or out of hospital and the turn over monthly examined. Customer satisfaction is currently tested by mail, focused on Emergency Department and admission.

Emergency medicine indicators set have to be considered a part of a national voluntary program of Accreditation health care facilities that the Italian Society of Emergency Medicine (S.I.M.E.U.) is conducting. Accreditation project is a powerful tool to induce a change and to lead improvement. Clinical indicators should be considered as "flags" which identify problems or opportunities for improvement in patient management. Benchmarking is the gold standard process to valuate intrahospital and inhospital quality health care in emergency department.

A MODEL FOR A COMMUNITY-BASED VOLUNTEER FIRST RESPONDER CORPS IN RURAL JAMAICA, WI

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In response to the near-drowning of a local boy in Treasure Beach, Jamaica, a multi-disciplinary group of local community members and New York-based emergency medicine specialists developed a volunteer EMS system. To our knowledge, this is the first community-based volunteer ambulance corps in the country. Treasure Beach is a rural fishing and agricultural village on Jamaica's Southwest coast. Based on community interviews, surveys and nationally published data, drowning, near drowning and blunt trauma were identified as major causes of morbidity and mortality.

Methods: A needs assessment was performed via surveys and resident interviews. Water safety, infant and child CPR, prehospital care and transfer of patients to receiving facilities were identified as priorities. Based on this community input, a multi-phase program was designed and implemented.

Results: In Phase 1 (September 2001), a team of emergency physicians, paramedics, nurses and CPR instructors trained and certified 30 local volunteers in standardized CPR techniques. A select group was trained in basic water rescue techniques. In phase 2 (November 2002), the Treasure Beach Emergency Response Unit (TBERU) was established and recognized by the Jamaican Ministry of Health. Twenty seven volunteers were enrolled in a one-week training course and were certified in adult and pediatric CPR, standard first aid, MVC disentanglement skills and advanced extrication techniques. They established an effective notification system for the community and are on full-time call for emergencies in a defined area.

Conclusions: This program demonstrates that a partnership between local community members and emergency medicine specialists can establish a volunteer EMS system in rural Jamaica. Ongoing research will explore the efficacy of the program and its impact on community health.

OUTCOME EVALUATION IN INJURED PATIENTS; USING STANDARDIZATION METHODS TO REDUCE BIASED CONCLUSIONS

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Objectives: More than 38 percent of injury-related mortalities in Iran occur in hospital centers, so the outcome evaluation in different trauma centers can play a significant role in improving quality of health services. Comparison of center-specific death rate can resulted in biased conclusions because of the role of biases and confounders. Multiple quantitative trauma scoring systems are feasible to adjust trauma severity and the Trauma and Injury Severity Score (TRISS) is the commonest one. TRISS calculates survival probabilities of patients according to standard norms, which can be compared with observed values of survivors.

Methods: In a cross-sectional study, the trauma severity of a random sample (525 cases admitted or deceased in hospital due to trauma) from two academic centers (Iran University of Medical Sciences & Health Services) was determined. To this purpose, clinical records of all patients and autopsy records of non-survivors were assessed.

Results: From the total 525 injured cases, 6.5 percent had expired. There was a significant difference between the calculated and expected values of survivors (451 vs. 457.12) and Z statistic was –2.29 ($P< 0.05$). The W score (-1.27) showed that the mortality of patients should be 1.27 person/100 cases lower than now in the standard population of trauma centers.

Conclusion: The centers with a low Z and W scores should be encouraged to evaluate the process of injured patient management. Using these methods is recommended as a part of quality management in injury surveillance and trauma systems.

COMPARISON OF HOSPITAL ADMISSION AND MORTALITY RATES IN PATIENTS WITH UNEXPLAINED SYNCOPE VERSUS PATIENTS WITH PRESUMPTIVE DIAGNOSIS IN THE EMERGENCY DEPARTMENT

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Objective: The purpose of this study was to asses the impact of establishing a cause of syncope on hospital admission, and 1- and 3-year mortality rates in patients presenting with syncope to the emergency department (ED).

Methods and results: Charts of all patients admitted to ED between July 1999 and June 2000 were reviewed by a member of cardiology team. Patients with loss of consciousness were selected and only those with definitive syncope were included. Health care authorities' data was used to asses 1-year and 3-year mortality rates. A total of 245 patients were included. In 122 (50%) a presumptive diagnosis was established and 123 (50%) had unexplained syncope. Patients with unexplained syncope were younger (56.7 +/- 20.0 vs 62.8 +/ - 17.7 years, p=0.03). Admission rates were similar for unexplained and presumptive group (38% vs 34%, p=NS) as were 1-year and 3-year mortality rates (7% vs 13%, p=NS, 16% vs 26%, p=NS, respectively). Multivariate analysis revealed abnormal electrocardiogram (OR: 2.82, 95%CI 1.77 - 4.52, p=0.02) as independent predictor of hospital admission for unexplained syncope, whereas heart failure (OR: 11.7, 95%CI 3.82 - 35.80, p=0.02) and age>65 (OR: 3.31, 95%CI 2.08 - 5.26, p=0.01) were independent predictors in presumptive group. Similarly, heart failure (OR: 9.40, 95%CI 4.03 - 21.95, p=0.008) independently predicted 1-year mortality in patients with unexplained syncope and abnormal electrocardiogram (OR: 6.41, 95%CI 3.12 - 13.12, p=0.01) in those with pre-

sumptive diagnosis. The only independent predictor of 3-year mortality in both unexplained and presumptive groups was age>65 (OR: 9.49, 95%CI 4.84 - 18.62, p=0.001, OR: 6.40, 95%CI 3.63 - 11.29, p=0.001, respectively).

Conclusions: Establishing a cause of syncope in ED does not influence hospital admission rate nor long term mortality. Identifying underlying cardiovascular disease should be the major focus of the evaluation in the ED.

EMERGENCY RESUSCITATION ROOM PATIENTS – DO THEY REALLY HAVE DIFFICULT AIRWAYS?

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Aim: To see whether patients who are treated in the resuscitation room of the emergency department are more likely to possess characteristics that are associated with a difficult airway and a difficult intubation, than patients with minor injuries treated in the examination room of the same emergency department.

Methods: 100 patients treated in the resuscitation room, and 300 patients treated in the examination room (or minor injuries area) of a busy University teaching hospital between June 2002 and January 2003 by one of three doctors of registrar level, were assessed on 17 criteria based on the 'LEMON law' devised by the developers of the US National Emergency Airway Management Course (1). A 'LEMON score' was also designed to give a quantitative assessment of the expected level of airway management difficulty.

Results: Patients treated in the resuscitation room of the emergency department were more likely to be older (mean 53.7 years +/- 22.9 vs 35.8 years +/- 17.0, p<0.001) and to have protruding teeth (5.0 % vs 0.7 %, p<0.001), false teeth (17.0 % vs 4.7 %, p<0.001), large incisors (10.0 % vs 1.0 %, p<0.001) and an abnormal facial shape (10.0 % vs 1.7 %, p<0.001). They were also more likely to have a decreased hyoid to mental distance (71.6 % more than 3 fingers vs 88.0 %, p<0.001) and reduced neck mobility (2.57 vs 2.94, p<0.001). A difference between the two populations was found in 7 of the 17 variables measured. Mean 'LEMON scores' for the two groups showed no difference (3.31 vs 3.38, p=0.89 ns).

Conclusions: The population of patients treated in the resuscitation room of our emergency department were more likely to possess some characteristics that have been previously associated with a difficult airway and a difficult endotracheal intubation, than patients with minor injuries treated in the examination room. The resuscitation room population seems to be a distinct population. The increased difficulty previously shown in their airway management is probably attributable to two or three airway characteristics rather than all the criteria assessed as part of the 'LEMON law' emergency airway assessment tool.

1. Murphy MF, Walls RM. The Difficult and Failed airway. Manual of Emergency Airway Management. 31-39.

IS THE 'LEMON LAW' A USEFUL EMERGENCY AIRWAY ASSESSMENT TOOL?

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Aim: To see whether the 'LEMON law' devised by the developers of the US National Emergency Airway Management Course (1), is a useful and practical airway assessment tool in patients undergoing treatment in the resuscitation room of the emergency department.

Methods: 100 patients treated in the resuscitation room of a busy University teaching hospital between June 2002 and January 2003 were assessed by one of three doctors of registrar level, on 17 criteria based on the 'LEMON law' as part of their initial resuscitation assessment.

Results: Height and weight was not available for most patients being treated in the resuscitation room and could often only be estimated. All 7 criteria based on the 'LOOK' section of the law (facial trauma, protruding teeth, large incisors, abnormal facial shape, beard or moustache, large tongue and false teeth) could be adequately assessed. Data for the 'EVALUATE' section (inter-incisor distance, hyoid to mental distance and thyroid to mouth distance) could not be obtained in 10 patients, with inter-incisor distance being the most problematic (not obtained in 10 patients). 'MALLAMPATTI' score was unavailable in 43 patients, and had to be assessed in the supine position in 32 of the remaining 57. Assessment for an 'OBSTRUCTED' airway and for 'NECK MOBILITY' was able to be performed in all patients.

Conclusions: The 'LOOK', 'OBSTRUCTION' and 'NECK MOBILITY' arms of the LEMON law are the easiest to assess in patients undergoing treatment in the resuscitation room of the emergency department. The 'EVALUATE' and 'MALLAMPATTI' criteria are less suited to the very specialist population that present to the resuscitation room, as the assessment of these is more problematic and more prone to inaccuracy. We suggest that the 'LEMON law' airway assessment should be revised to include less emphasis on the 'EVALUATE' and 'MALLAMPATTI' criteria in order that it may be more suited to a resuscitation room population and slightly less time consuming to perform.

1. Murphy MF, Walls RM. The Difficult and Failed airway. Manual of Emergency Airway Management. 31-39.

COMPARISON OF NEEDLE CRICOTHYROIDOTOMY WITH TRANSLARYNGEAL VENTILATION VERSUS OPEN CRICOTHYROIDOTOMY IN A FAILED RAPID SEQUENCE SHEEP MODEL

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Background: We developed a novel large animal model of the "Can Not Intubate/Can Not Ventilate" (CNI/V) scenario to compare the efficacy of Manual Jet Ventilation (MJV) through a percutaneous airway catheter with Surgical Cricothyrotomy (SC).

Methods: Twelve 40-80kg sheep were assigned either to MJV or SC groups. The animals were sedated, intubated, and monitored. Central venous and arterial lines were placed. CNI/V was then simulated by removing the endotracheal tube and inducing paralysis with Vecuronium. Once the SaO_2 fell to 80% (t=0), MJV catheter placement or SC was initiated. Ventilation with 100% oxygen at a rate of 20/minute began upon successful airway placement. MJV was administered at 50 psi. HR, BP, SaO_2, pH, PCO_2, and PO_2 were recorded at t=0, 30, 60, 90, 120, 180 seconds, and t=5, 10 and 20 minutes. Data were reported as mean ± standard error of the mean over the observation period. Group comparisons were analyzed by ANOVA with repeated values. All statistical tests were two-tailed and alpha was set at 0.05.

Results: Body weights were not significantly (p=0.08) different between the MJV (65 ± 6 Kg) and SC (52 ± 3 Kg) groups. Median procedure time for MJV (20s) and SC (24s) was not significantly (p=0.69) different.

Post-Procedure*	Jet Ventilation	Cricothyrotomy	p
SaO2 (%)	93.2 ± 2.8	95.7 ± 2.8	0.65
pH	7.52 ± 0.04	7.50 ± 0.04	0.70
pCO2 (mmHg)	29.3 ± 3.0	32.5 ± 3.0	0.47
pO2 (mmHg)	273 ± 57	290 ± 57	0.84
HR (beats / min)	138 ± 8	121 ± 8	0.16
MAP (mmHg)	99.4 ± 5.3	85.0 ± 5.3	0.09

Conclusion: Using a realistic model of CNI/V we found no difference in respiratory or hemodynamic parameters between MJV and SC. Adequate ventilation and perfusion was maintained solely by MJV for up to 20 minutes.

SUCCINYLCHOLINE OR ROCURONIUM? A META-ANALYSIS OF THE EFFECTS ON INTUBATION CONDITIONS

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Objective: To date, no study comparing the intubation conditions produced by succinylcholine (SCH) and rocuronium (ROC) has had a sample size large enough to draw firm conclusions. This meta-analysis was undertaken to compare the frequencies of obtaining "excellent" and "unacceptable" intubation conditions created by using SCH and ROC as the sole paralytic agent in endotracheal intubation (ETI) in adult patients.

Methods: Eligible studies were identified via MEDLINE and manual search of published references. Data regarding total number of subjects, study setting, number of treatment arms, number of subjects in each treatment arm, names and dosages of all medications used proximal to or during ETI, numbers and frequencies of subjects in each treatment arm whose intubation scores were excellent and unacceptable; method of randomization; blinding; and whether all subjects were accounted for were abstracted from each study. The frequencies of excellent and unacceptable ETI conditions in subjects receiving SCH 1.0-1.5 mg/kg and ROC 0.6-1.2 mg/kg were determined using standard statistical methods.

Results: Inclusion criteria were met by 16 RCTs, representing 1362 subjects (577 receiving SCH and 785 receiving ROC). All of the studies were conducted in operation room settings. True RSI was performed in eight studies, representing 993 subjects. SCH was associated with a 17.7% increase (95% CI = 13 to 22%) in the frequency of excellent ETI conditions and a 5.1% decrease (95% CI = -7.3 to -2.9%) in the frequency of unacceptable ETI conditions, when compared with ROC. In the subgroup undergoing true rapid sequence intubation, SCH was associated with a 19.1% increase (95% CI = 13.7 to 24.5%) in the frequency of excellent ETI conditions. No patient with a clinically important change in vital signs or side effect was reported in the eligible studies.

Conclusion: SCH appears to be superior to ROC in creating excellent ETI conditions and avoiding unacceptable ETI conditions.

THE EASYTUBE AS RESCUE DEVICE IN "CANNOT INTUBATE" SITUATIONS

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Objective: The EasyTube (EzT, Willy Rusch GmbH, Germany) was introduced in spring 2003. It is designed to be used as a supraglottic device for "cannot intubate" situations as well as to perform endotracheal intubations in Anaesthesia or Emergency Medicine patients with a high risk of airway problems (e.g. rapid sequence induction). Therefore, the EzT was used as a rescue device in patients with failure to intubate within two attempts during routine anaesthesia induction and emergency medicine.

Material and Methods: The EzT is a double lumen tube with an oropharyngeal proximal cuff and a distal cuff. The device has an outlet at the distal end and a second outlet in the other lumen into the pharynx. Therefore, it may be used as an endotracheal tube or as a supraglottic device, enabling patient ventilation either in the oesophageal or in the tracheal position of its tip. The EzT (size 41 Ch, tip diameter 7.5 mm) was inserted blindly into the oesophagus in 1 patient with acute failure of mask ventilation during introduction of general anaesthesia and in two patients presenting difficulties to intubate the trachea because of a high Cormack-Lehane (CL) grade.

Results: In patient #1 (rapid sequence induction, CL 3) and #3 (prehospital resuscitation, CL 3), the EzT was inserted by using a laryngoscope directly into the oesophagus. In Patient #2 (difficulties in mask ventilation following electroconvulsive therapy) the EzT was introduced blindly into the oesophagus. Oxygenation and ventilation of all patients could be achieved within 20 to 30 sec. The position of the tube was confirmed by auscultation of breath sound, visible chest movements and by capnography. No complications or side effects were recorded. In patient #3, thoracic compression were performed at a rate of 100/min; there was no need to synchronize the ventilation.

Conclusion: The intubation of the oesophagus and supraglottic ventilation with the EzT is a fast and successful technique in emergency airway management.

Its airway seal pressure was sufficient to de-synchronize thoracic compressions and ventilation during resuscitation. The EzT is a suitable device for unpredicted airway difficulties.

COMPARISON OF VIDEO-LARYNGOSCOPY AND OROTRACHEAL INTUBATION FOR AIRWAY MANAGEMENT IN A MANIKIN

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Objective: Endotracheal intubation via direct laryngoscopy is performed since the early 20th century. In recent years, new options of this technique have been introduced by the use of video equipment (V-ETI) in conjunction with laryngoscopy. V-ETI is probably especially useful for inexperienced physicians to provide better training and safer airway management. Material and Methods: During airway management training courses for physicians, ETI by direct laryngoscopy (L-ETI) and V-ETI (Video-Laryngoscope, Karl Storz, Germany) in an airway manikin (Bill, VBM, Germany) were compared. L-ETI was performed using a standard laryngoscope, Macintosh blade size 4, and a standard endotracheal tube (diameter 8.0 mm). For V-ETI, an equivalent blade and the same tube size were used. After a demonstration of both techniques, every physician had to perform 3 intubations with each device. The maximum time per attempt was limited at 40 sec.

Results: 61 physicians took part in the study. The success rate of endotracheal intubation in the first attempt with the V-ETI (100 %) was significantly higher, compared to the L-ETI (78 %, p= 0.001). The time to intubate the trachea was similar using V-ETI and L-ETI in all attempts (1st 21.3 sec. vs. 22.3 sec.). The difference of time needed between first and third attempt was also similar in both groups (V-ETI 5.95 sec. vs. L-ETI 5.39 sec.).

Conclusion: In this airway model, the V-ETI provided higher success rates and similar time to secure the airways, compared to the standard L-ETI. Furthermore, the process of intubating the trachea – including conceivable problems – may be observed and rated by supervisors. For clinical use, V-ETI contributes to patient safety during airway management.

THE EFFECT OF NON-INSULIN DEPENDENT DIABETES MELLITUS ON UNCONTROLLED HEMORRHAGE IN A RODENT MODEL

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Introduction: Patients with diabetes mellitus have been shown to have diminished sympathetic and parasympathetic control of their cardiovascular system. Objective: To test the null hypothesis that there would be no difference in the hemorrhage volumes and hemodynamic responses to uncontrolled hemorrhage between Zucker Diabetic Fat rats (ZDF) and euglycemic Sprague-Dawley rats (SD).

Methods: Twenty-four adult male rats (12 ZDF and 12 SD) were anesthetized with Althesin via the intraperitoneal route. The femoral artery was cannulated by cutdown for heart rate (HR), mean arterial pressure (MAP) and blood gas sampling. Twelve rats (6 ZDF and 6 SD) underwent uncontrolled hemorrhage by 50% tail amputation. Twelve rats (6 ZDF and 6 SD) served as non-hemorrhage controls. The HR, SBP, DBP, MAP, lactate (LAC), glucose levels (GL) and cumulative blood loss (CBL) were measured pre-hemorrhage and then every 15 minutes post-hemorrhage for 120 minutes. Data were reported as mean ± standard error of the mean. Comparisons between groups were analyzed by ANOVA with repeated values with post-hoc testing by Bonferroni (all tests were two-tailed). Statistical significance was defined by an alpha = 0.05.

Results: Pre-hemorrhage the SD and ZDF rats were evenly matched for LAC, HR, SBP, DBP, and MAP. CBL corrected for body weight (cc/100 grams) was significantly (p = 0.008) greater in the ZDF (1.49±0.12) rats as compared to the SD (0.38±0.11). The decrease in time-averaged MAP post-hemorrhage were not significantly (p=0.408) different between SD (23±10 mmHg) as compared to the ZDF (32±10 mmHg) group. At the end of the observation period the ZDF rats had significantly (p<0.001) higher LAC (7.96 mmol/L ± 0.61 mmol/L) than the SD (2.0 mmol/L ± 0.41 mmol/L) rats. Severe hyperglycemia (> 27.8 mmol/L) developed in all ZDF rats.

Conclusions: Diabetic compared to non-diabetic rats suffered greater blood loss and more severe lactic acidosis after a comparable uncontrolled vascular injury.

THE MORPHOLOGIC AND QUANTITATIVE ANALYSIS OF LEUKOCYTES IN THE PATIENTS WITH MULTIPLE SYSTEM TRAUMA

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In our study, we analyzed the number and the morphological features of leukocytes in blood samples taken from patients with multiple trauma who were transported to emergency service because of traffic accident or falling down from building. Totally, 51 patients' the 30 of whom were male and the 21 of whom were female, and whose ages between 16 and 59, blood samples was evaluated. All of the samples were taken from patients in first 4 hours after trauma.

The blood samples were obtained from patients with multiple trauma in sterile tube with anticoagulant. CBC was analyzed by Blood Cell Counter and two smears were prepared from each patient and stained with Giemsa. The smears were evaluated under light microscope. For morphometric measurement, ocular micrometer was used. All of the data were also analyzed statistically by SPSS 10.0.The number of leukocyte had significantly increased in all patients (ptotal<0.000; pmale<0.000 and pfemale<0.001) and there were no significant differences between male and female groups (p<0.05). Interestingly, the rates of the type of leukocytes were between normal ratios in CBC counting (p<0.000). In morphologic and morphometric evaluation, we detected that the number of leukocytes was clearly increased in smear, however, there were no majority of the type of leukocyte.On the other hand, the number of neutrophil stab whose ratio was 12% had clearly increased. However, totally mapping of type of leukocytes was concordant with CBC counter results on a large scale. The average diameter of neutrophil and lymphocyte had close to lower limit.There were no morphologic defect in all of the leukocytes.

These results indicate that the number of all type of leukocytes increases all together after multiple trauma. However, evidently increasing of the number of neutrophil stab informs us warning about posttraumatic infection. Therefore, the usage of the extended spectrum antibiotics in patients with multiple trauma strengthens body defense quietly.

THE UTILITY OF BASE EXCESS AND ARTERIAL LACTATE IN DIFFERENTIATING MAJOR FROM MINOR TRAUMA IN PATIENTS WITH NORMAL VITAL SIGNS

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Objectives: Base Excess (BE) and Lactate (LAC) levels are valuable tools in assessing trauma patients. They have been shown to be markers for ongoing hemorrhage, as well as prognostic indicators for mortality. No studies to date have evaluated the utility of initial BE and LAC in trauma patients with normal vital signs.

Methods: Prospective, observational study of trauma patients in an Urban Level I Trauma Center. Inclusion criteria: Blunt or penetrating trauma patients Exclusion criteria: Trauma patients with isolated head injury. Predictor Variables: Vital Signs (VS) were defined as Normal (NVS) or Abnormal (AVS) if (either systolic blood pressure < 90 mmHg or heart rate > 100 beats per minute); and Metabolic Parameters (MP) were defined as Normal (NMP) or Abnormal (AMP) if (either BE < -2.0 mmol/L or LAC > 2.2 mmol/L). Outcome variables: Trauma severity was defined as Minor (MNT) or Major (MJT) if (either the Injury Severity Score >15, or blood transfusion, or had a decrease in hematocrit > 10%). We compared the operating characteristics of VS before and after considering MP in differentiating MNT from MJT. Statistical Analysis: Data were reported as counts and percentages,

Results: 296 trauma patients were studied, a mean age of 31.4 yrs. (13-87 yrs.), 86 % male, and 79 % penetrating injuries with a 21% prevalence of MJT. VS VS + MP Sens. 49% 86% Spec. 73% 41% PPV 33% 28% NPV 84% 91% LR+ 1.85 1.45 LR- 0.69 0.35 Adding information about BE and LAC to VS resulted in the correct re-categorization of 23 MJT patients with normal vital signs, this improved sensitivity, NPV and LR.

Conclusion: In trauma patients with normal vital signs BE and LAC are valuable in identifying a significant subset of patients with major trauma.

SEPSIS & SEPTIC SHOCK FREQUENCY IN THE GUNSHOT INJURED, IN COUNTRY WITH LIMITED RESOURCES

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Background and Goal of study: Gunshot wounds get contaminated since the beginning from the exogenous or endogenous flora of the injured himself. Factors influencing the development of infections in these injuries are: patient's general grave status, partial or delayed surgical treatment, and non-adequate antibiotic therapy. Sepsis frequency and septic shock in the gunshot injuries, identification of bacterial flora and sensibility towards antibiotics found out.

Materials and methods: From 1863 patients with gunshot injuries, 1083 were hospitalized: of whom 314 in the intensive care ward. Out of 314 cases 85 (27.07%) manifested the symptoms of sepsis, whereas 21 of them or 24.7%, have displayed a clinical framework of the septic shock. Average age 43 years of age, 71 M and 14 F. The abdominal and urogenital systems account for 40%, the thoracic abdominal ones 31.76%, the head 12.94%, with more than two infections sites, 14.11%.

Results and discussions: T° present in 100% of the cases, fevers have been manifested and treated in 54 or 63.52%, oliguria present in 32 or 37.64%, hyponathremia in 57 or 67.05%, as well as tachycardia, polypnea, dyspnea, neck rigidity, etc. Empiric therapy started in 100% of the cases with ß – Lactaminics and aminoglucosidics. Specific therapy started after the interruption of the empiric therapy in 64% of the cases, after 3 – 6 days. Supportive therapy: Liquids, plasma, and electrolytes, in 100% of the cases, parentheral nutrition in 32% of the cases, enteral one for the rest. The isolated causes have predominated according to the following order: Klebsiella, E. Coli, Pseudomonas, Providentia, Acinetobacter etc. Mortality 20 cases or 23.52 % including here 19 cases, which presented septic shock. Septic shock, 21 cases. Purpose of treatment: rapid return of perfusion insufficiency, infection identification and control. There have been administered: vassal active drugs, dopamine, dobutamin, adrenaline, nor adrenalin, MV in 100%, anti-H2 in 100%, and steroids in 14.28% of the cases. 19 cases died. 137 microbial strains have been identified.

Conclusions: Sepsis encountered in 27 %, of which 24.7% got complicated in septic shock. Nearly in ¼ (23.5%) a mixed infection and in ¨÷ (29.4%) of them re-infection was detected. Negative gram bacteria occupied the main place. They were distinguished in 82.5% of the cases. The Enter bacteria prevailed in 70.1%. E. Coli 24.1% and Klebsiella pneumonia 14.6%. There was discovered a high percentage of resistant strain towards several antibiotics. Multi resistant strains were differentiated at a high frequency, 73%. Etiological structure and high frequency of multi-resistant indirectly indicate that a great part of the studied infections pertain to the hospital nature.

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HYPERTONIC SALINE INVOKES DIVERGENT INFLAMMATORY EFFECTS ON HUMAN VASCULAR SMOOTH MUSCLE

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Introduction: Hypertonic saline (HTS) has been used as a intravascular volume expander in resuscitation from clinical hemorrhagic shock. Recently, the anti-inflammatory effects of HTS have been recognized as potentially more important in shock resuscitation. Yet, the optimal dosing and timing of these clinical effects remain unknown. The sustained pro-inflammatory cascade in humans includes the activation of various mitogen activated protein kinases (MAPK).

Hypothesis: HTS results in uniform anti-inflammatory effects on the MAPK cascade in human vascular smooth muscle cells.

Methods: Human vascular smooth muscle cells (HVSMC) were incubated for 0 to 30 min with 100ng tumor necrosis factor (TNF)-alpha with or without HTS (180mM) and assessed for p38 MAPK and p42/44, ERK-1, -2phosphory-

lated activation using SDS-PAGE gels and confirmed by digital immunofluoresence imaging (ANOVA with post-hoc Scheffe testing).

Results: HTS inhibits p42/44 ERK-1 and -2 activation of HVSMC by TNF-alpha, despite elevation of baseline levels by HTS (0.60 vs. control 0.35, p <.01). In contrast, p38 MAPK activation was moderately enhanced at baseline (0.34 vs. 0.05 control, p< .01) and HTS did not block p38 MAPK activation by TNF-alpha. Indeed, p38 MAPK activation appeared to be elevated by HTS after 30min TNF exposure (0.79 vs 0.04 control, p<.01)

Conclusions: While HTS adequately blocked ERK-1 activation, it augmented and sustained the p38 MAPK activation in human vascular smooth muscle. This suggests that while hypertonic saline may inhibit certain inflammatory pathways, other stress-induced inflammatory pathways may be exacerbated.

THE ROLE OF B-TYPE NATRIURETIC PEPTIDE IN CARDIAC TRAUMA USING A PORCINE MODEL

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Introduction: B-type Natriuretic Peptide (BNP) is a hormone, which is secreted by the heart and acts on the cardiovascular system. BNP induces diuresis, dilates blood vessels, and inhibits the renin-angiotensin-aldosterone axis. Its levels rise in congestive heart failure (CHF) and are an accurate indicator of the degree of left ventricular (LV) dysfunction in CHF. The serum levels of BNP are elevated within fifteen minutes of cardiac dysfunction. The assay, which measures BNP levels, is run in under fifteen minutes and is easily performed at the bedside. The effect of cardiac trauma upon BNP levels is unknown. Prior to BNP measurement in humans, BNP levels were studied in pigs.

Objective: To determine if BNP levels might serve as an early marker of cardiac trauma.

Methods: In procedure labs using pigs, porcine BNP levels were measured in ten pigs before (baseline) and after induced cardiac contusion (precordial thump), synchronized electrical cardioversion, pericardiocentesis, and ventricular penetration (transthoracic needle). Blood was drawn fifteen minutes after each insult, and BNP levels were determined with a BNP meter. Results: Cardiac contusions (n= 8) caused a 38% decrease in BNP levels. Cardioversion (n=7) caused a 50% decrease in BNP levels. Pericardiocentesis (n=6) caused a 67 % decrease in BNP levels. Ventricular penetration (n=2) caused a 96% decrease in BNP.

Conclusions: BNP levels did not rise in response to both penetrating and blunt trauma. In fact, the levels decreased in all cases. Limitations are small sample size and use of animal model.

REVIEW OF HAZARDOUS MARINE LIFE

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The Marine environment provides us with many wonderful benefits both for our survival and our enjoyment. Along with these benefits, the undersea world has its share of dangers. This lecture will review several aspects of hazardous marine life. We will identify many marine animals that cause injuries to our patients, (including Sharks, Rays, Jelly Fish, Urchins). We will review the mechanism of injury, the field management, hospital and outpatient treatment of these injuries.

MOTOR VEHICLE COLLISIONS WITH LARGE ANIMALS

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Objectives: To review the incidence, mechanism and distribution of injuries, effects, and prevention of motor vehicle collision with large animals.

Methods: MEDLINE search on motor vehicle collisions with large animals was performed. Further articles were retrieved from the references of the original articles. The results were analysed and compared.

Results: Collision with large animals is a serious problem that affects motorists in most parts of the world and appears to be increasing in incidence. The moose causes a typical rear- and downward deformity of the roof of the car while the camel tends to fall on the roof of the car causing cervical and head injury to the occupants. Injuries caused by kangaroos are mild as kangaroo tends to resemble human pedestrians. Most the collisions tend to occur at night and dawn with a seasonal variation. Injuries may be caused by direct collision with the animal or hitting another object when trying to avoid it. Alarming signs, underpasses or overpasses for animals, alarming devices that frighten the animals were all used to prevent the collisions. Roo-bars are used in Australia to reduce the car damage when hit by a kangaroo. Fencing of hundreds of kilometres seems to have reduced the incidence in United Arab Emirates.

Conclusions: The mechanism of injury will vary with the size and height of the animal and may be serious. Increased awareness of the effects of collision with large animals and ways to reduce it has to be promoted..

INJURY DURING CONTACT WITH HORSES

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Background: The objective was to examine equine-related trauma at eight Flemish Emergency Departments.

Methods: Data were prospectively collected on all patients admitted from May 2001 to May 2002 for treatment of horse-related injuries.

Data were: profile of patient and horse, circumstances, mechanism of accident, safety equipment, injuries, injury severity score, length of stay and delay of work.

Results: 465 patients were included and 68,48 % were female. This is significant higher than the percentage of women being member of a club (p < 0.0001) The median for age was 21,9 years. 24,1 % of the accidents was with a pony (52 % of horseback riding). 90 % of the patients had an ISS <5. Three patients had an ISS of > 16. 41 patients had a head injury, however there was no correlation (p = 0,23) with not wearing a helmet. Identical lack of correlation was observed for ankle

lesions and boots, finger lesions and gloves. However, there was a clear difference in injury severity between experienced (active years + > 1 hour per week) and less experienced horseback riders (non-parametric: p = 0.011). The mean length of stay in the hospital was 1.25 days with a maximum of 59 days.

Conclusions: Injury due to contact with horses is not uncommon. Especially young females are victim of such injuries. In our study, we could not demonstrate the advantage of protective measures. However, we observed that years of horseback riding and number of hours practising per week correlate with a decrease in injury severity.

HORSE-RELATED INJURIES: A PROSPECTIVE STUDY WITH REMARKABLE RESULTS: "DON'T FORGET THE THORACOABDOMINAL INJURIES!"

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Objectives: As a consequence of a high incidence of horse related injuries, a prospective study was set up in our Emergency Department to evaluate the equine accidents during one year. The objective was to describe the nature of injuries occurring on - or around horses and to compare our data with previously published work in this area.

Methods: Patients involved in horse accidents were asked to complete a form at the Emergency Department. They were asked about their skills in horse riding, use of protective gear, nature of - and circumstances in which the accident took place. Data regarding demographics, injuries and outcome were also recorded.

Results: 136 patients' records were analysed. The patients were mostly young and female. 58% had limb injuries (34 lower and 24 upper limb). 15% had a thoracoabdominal injury, 15% a head injury and 13% a spine or pelvic injury. In the upper limb, mainly greenstick fractures were encountered, in the lower limb mainly contusions. Head injuries were mostly minor (only one needing a CT scan) as the majority of patients were wearing helmets. Thoracoabdominal injuries, in contrary, were serious and possibly life-threatening in 40%.

Conclusion: In contrast to previous literature, in our results, the incidence of thoracoabdominal injuries is equal to that of head injuries. Secondly, most serious injuries were seen due to a horse kick on the thorax with (sometimes initially unsuspected) intraabdominal lesions, where head injuries were mainly minor (as a result of helmet wearing). This contrast can be due to a changing pattern of injuries to horse riders, a different local riding population or to the prospective set up of the study. Locking the stable door seems to be the best prevention in equestrian trauma.

ENVIRONMENTAL FACTORS AND HEAT RELATED ILLNESS

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Kingdom of Bahrain, where in summer temp reaches up to 50C and humidity is above 90%. Heat related illness in summer is common among laborers and certain other professions, extreme of ages, those taking certain medication and persons having certain underlying disease are also prone. Body heat is gained from environmental and produced by metabolism inside the body is normally dissipated by increasing blood flow in the skin and by sweating. The term "Heat Index" is a measure of combination that higher temperature and relative humidity reduces body ability to cool itself by decreasing vaporization and increasing internal body heat. Successive increment in the level of work performed in a hot environment results in adaptation that eventually allows a person to work safely at a level of heat were intolerable or life threatening.

Material And Method: E.D of Salmaniya Medical Complex receives on average of 252000 patients annually. The kingdom population in the year 2000 was 398200 Bahrainis and 239400 non-Bahrainis of which 67% were between 15-64 years. Total labor force above 15 years in 2000 was 123900 Bahrainis and 177000 non-Bahrainis. Sector wise work related distribution in%: Farmer&fishermen 1.14%, miners 0.29%, craft&production 75.04%and others 23.4%. The study conducted from available record of 200 patients who visited the emergency department of SMC with related illness from the month of July to September in the year 1999. Max.temp and relative humidity were obtained from meteorological office data and heat index was calculated by work out equation which obtained by multiple regression analysis.

Result: Data showed mean average of pts 4.6/day visited emergency dept, when mean average of heat index was 96.1C and pts 2.4/day when mean H.I was 54C. Age ranged from 13 to 60 years with most frequent age b/w 23-41years. Most frequent time of visit was between 10am to10pm. Nationality wise 44.3% were Indians 23% Bangladehis, 14.7% Pakistanis 10.7% Bahrais and 6.55% others.

SENSITIVITY OF AND COMPLIANCE WITH PRE-HOSPITAL TRAUMA TRIAGE CRITERIA

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Two pre-hospital functions are pivotal in a trauma system; first, a reliable and accurate pre hospital triage tool, and second, compliance with this triage tool. Our objective was to evaluate the effectiveness of Nova Scotia s trauma system in improving timely delivery of major trauma patients to designated trauma centers.

Methodology: Using the Nova Scotia Provincial Trauma Registry all patients transported by ground ambulance and having an ISS greater than 15 were included in the study. Major trauma patients are identified by pre hospital criteria derived from the American College of Surgeons criteria but without mechanism of injury for adult patients. According to policy, all patients meeting any of the major trauma triage criteria are to be transported to a trauma center.

Results: During the study period, the Registry identified 175 trauma patients. A total of 80 patients met trauma triage criteria (TTC) for a sensitivity of 45.7%. Sixty-two were transported to a trauma center (Compliance of 77.5%). Of the 80 patients, 57 had an ISS > 15 for a specificity of 71.3%; This translates into an undertriage of 51.3%, and overtriage of 28.75%. Including ejection from automobile, pedestrians and falls from the height mechanisms in the criteria for adult patients would increase the sensitivity to 82%. This would increase overtriage to 29.7% and reduce undertriage to 18%.

Conclusions: A significant proportion of seriously injured patients meeting trauma triage criteria were transported to non-

trauma centers. Undertriage may be improved significantly with minimal effect on overtriage by including some mechanisms of injury.

INTUBATION CONFIRMATION TECHNIQUES ASSOCIATED WITH UNRECOGNIZED NON-TRACHEAL INTUBATIONS BY PRE-HOSPITAL PROVIDERS

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Objective: We studied pre-hospital intubations performed by paramedics, which were later determined to be non-tracheal upon arrival to an urban, academic emergency department (ED). Our aim was to characterize the various confirmation techniques used among these unrecognized non-tracheal intubations.

Methods: We conducted a retrospective review of the emergency medical services quality assurance database over a period of 65 months. Paramedic patient care reports and hospital medical records were compared with regard to techniques used for airway evaluation. Simple descriptive statistics are used to summarize the data.

Results: During this study period, paramedics intubated 1643 patients. There were 35 intubations that were ultimately determined to be non-tracheal by receiving physicians (2%). Among these, 20 (57%) were intubated for trauma indications. Seven (20%) were children (<10 years). Fifteen (43%) did not have a pulse prior to intubation attempts. Overall, 21 (60%) had multiple confirmatory techniques employed by paramedics. The most commonly documented was 'equal lung sounds' (91%), followed by 'visualized cords' (37%). Colorimetric end tidal CO2 was used selectively among patients with pulses, 9/20 (45%). Seventeen (49%) of the non-tracheal intubations were potentially recognizable based on paramedic documentation.

Conclusion: An unrecognized, non-tracheal intubation is a potentially devastating consequence of failed airway management. We report a small, but not inconsequential, experience with failed pre-hospital airway management. In this emergency medical system, more frequent use of multiple confirmatory techniques (including end tidal CO2 detection) may help to reduce the incidence of this potentially life threatening scenario.

ACCURACY OF PULSE OXIMETRY IN INTENSIVE CARE PATIENTS WITH HYPERBILIRUBINEMIA

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Objective: Elevated bilirubin plasma levels (BPL) may falsify the measurement of oxygen saturation (OS). Only few and contradictory results of clinical studies do exist. Two studies revealed some effect on pulse oximetry, while others showed an impairment of CO-oximetry. Our clinical study evaluated the influence of elevated BPL on the measurement of OS both with a pulse oximeter and a CO-oximeter.

Methods: After approval of the local ethics committee, patients requiring mechanical ventilation were assigned to three groups: G_{normal} (BPL<1 mg/dl), $G_{moderate}$ (BPL 1-5 mg/dl), G_{high} (BPL>5 mg/dl). OS was measured simultaneously by pulse oximetry (SpO_2, SC1281, Siemens/Germany) and arterial blood gas analysis (ABGA, SaO_2, Radiometer 625, Copenhagen/Denmark). Bias (ÄS) was defined as SaO_2-SpO_2. Accuracy consisted of reliability (mean bias) and variability (number of values with ÄS>¡À2%). Results are presented as mean¡ÀSD. Analysis was performed with the t-test for paired values and Chi²-analysis.

Results: 83 patients (42m, 41f, 55¡À17 [20-82] years) were included. Reliability of normal BPL (G_{normal}: -0.3¡À1.7%, n=53) showed no significant deviation to patients with elevated BPL ($G_{moderate}$: -0.2¡À1.2%, n=22 and G_{high}: +0.6¡À2.0%, n=8, n.s.). Variability showed no difference between the three groups (n.s.). Overall regression analysis revealed no significant correlation (R^2=0.03) between BPL and Bias.

Conclusion: Accuracy (reliability and variability) of pulse oximetry does not digress to ABGA in critically ill patients with normal and elevated bilirubin plasma levels. With hyperbilirubinemia up to 20 mg/dl both techniques offer comparable reliability.

NASOTRACHEAL INTUBATION IN CURRENT EMERGENCY MEDICINE PRACTICE

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Objective: To describe current success rates, indications, methods, and complications of nasotracheal intubations (NTI).

Methods: Data was gathered from the National Emergency Airway Registry (NEAR) pilot study, a prospective, multicenter, observational study of ED intubations in 21 US hospitals. Inclusion criteria were all patients who underwent any attempt at NTI. The main outcome measure was success rate. Secondary outcomes included: indications, technique, who performed NTI, medications used, procedure time, and immediate complications. Descriptive statistics, chi-square and ANOVA were used to analyze data.

Results: Data was collected on 3,599 intubations, 306 (8.5%) involved NTI [19.6% no medication (group I), 13.4% sedation only (II), 67.0% topical anesthetic only (III)]. Of those who underwent NTI, males comprised 65.4% of patients, the mean age was 52.1 years and the mean GCS was 9.8. Success rate after first NTI course and all courses were 80.4% and 84.3%, respectively. First course success rate subgroup analysis included: I-75%, II-85%, and III-81%, p=0.44, with a 15% power to detect a 10% difference. EM residents performed 92.8% of NTI's. The most common indications were medical 65.6% (e.g. overdose 25.1%, CHF 12.8%, COPD 11.4%) and trauma 24.6% (e.g. airway protection 24.4%, head injury 35.4%). Induction agents were used in 40.8% of NTI's (e.g. midazolam 59.4%, etomidate 11.6%). The average time to intubate was: I-114 seconds (95% CI 73-155), II-140s (85-196), III-203s (132-274), p=0.29, with a 30% power to detect a 60 second difference. Immediate complications occurred in 31 NTI's (10.1%); most frequently: epistaxis (22.6%), esophageal intubation (19.4%), and failed course (19.4%).

Conclusion: NTI, although used in less than 10% of intubations, remains a viable option for airway management. NTI has an acceptable success rate and few complications.

Limitations of this study include potential selection bias and observational design.

COMPARISON OF EASYTUBE AND OROTRACHEAL INTUBATION FOR AIRWAY MANAGEMENT IN A MANIKIN

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Objective: Airway devices such as the Combitube or the Laryngeal Mask Airway are recommended in cases of failed endotracheal intubation attempts as well as for airway management by emergency medical personal not trained in performing endotracheal intubation (ETI). A new supralaryngeal device, the so-called EasyTube (EzT, Willy Rusch GmbH, Germany), was introduced in spring 2003. It was thus the aim of the study to compare ETI with the new EzT.

Material and Methods: During advanced airway management training for future emergency physicians (EP), ETI by direct laryngoscopy and the blind insertion of the EzT (adult size, 41 Ch.) were performed in an airway manikin (Bill, VBM, Germany). The EzT is a double lumen tube with an oropharyngeal proximal cuff and a distal cuff. The device has an outlet at the distal end and a second outlet in the other lumen into the pharynx. Therefore, it may be used as an endotracheal tube (ETT) or as a supraglottic device. ETI was performed using a standard laryngoscope, Macintosh blade size 4, and a standard ETT (diameter 8.0 mm). The EzT was inserted blindly without using a laryngoscope. After 1 demonstration of both techniques, every EP had to perform 3 intubations with each device. Maximum time per attempt was limited at 40 sec.

Results: 109 EPs took part in the study. The success rate of intubating and ventilating the manikin in the first attempt with the EzT (94.5 %) was significant higher, compared to the ETT (82.6 %, p=0.001). Time to securing the airway was faster using the EzT in all attempts (1st 17.1 sec. vs. 21.9 sec., p=0.001). Difference of time needed between first and third attempt was significantly higher in ETI (6.5 sec. vs. 3.4 sec., p=0.001). The average rating by the EPs (min. 1, max. 10) of the use of the EzT was a little higher than the ETI (7.4 vs. 7.2).

Conclusion: In this airway model, the EzT provided higher success rates and faster securing of the airways, compared to the standard ETI. Furthermore, handling of the EzT is simple and its users rate the device higher than ETI.

PULMONARY EDEMA AFTER BREATH-HOLD DIVING: CASE REPORT

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On December 2002, a 35-year-old man presented to the Emergency Department of the Pisa Hospital with cough, shortness of breath, hemoptysis and palpitations. He was a healthy, well trained breath-hold diver. Symptoms developed after several dives in the sea near Livorno a few hours before; in particular after returning to the surface from a dive to the depth of 36 m. Physical examination (PE) revealed tachycardia and coarse crackles on chest auscultation. Arterial blood gas analysis (ABG) showed a PaO2 of 63.5 mmHg with normal PaCO2 and pH. EKG showed sinus tachycardia (HR 115 bpm) and tall and peaked P waves. A thoracic computed tomography (CT) was obtained and revealed bilateral alveolar infiltration, suggestive of intra-alveolar hemorrhage.

Accordingly a diagnosis of pulmonary edema was made. The patient refused hospitalization and treatment, however, PE, ABG, EKG and CT were obtained at 72 hours and 10 days. At 72 hours PE and EKG were normal, PaO2 was 88 mmHg while CT showed a significant reduction in bilateral alveolar infiltration. After 10 days the CT demonstrated a complete resolution of the pulmonary infiltrates. Despite the seriousness of clinical and instrumental conditions and lack of treatment, we observed a rapid improvement of health status and parameters. Pulmonary edema in healthy divers is a rare, relatively new, syndrome probably related to an increased permeability of pulmonary capillaries (non-cardiogenic pulmonary edema), complicating scuba and breath-hold diving.

ANALYSIS OF AIRWAY RESUSCITATION FOR TRAUMA PATIENTS IN PENNSYLVANIA 1990-1999: FREQUENCY OF AND OUTCOMES FOR PATIENTS WITH PROLONGED ESOPHAGEAL INTUBATION

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Background: There is little known about the performance of airway resuscitation in trauma patients. There is even less known about the outcomes for these patients.

Methods: We reviewed Pennsylvania Trauma Foundation data for patients from 1990-1999 for the frequency of "prolonged esophageal intubation" (PEI) in either "at scene", "in transit" or "in ED".

Results: There were 21,244 intubations of trauma patients between 1990 and 1999. The frequency of PEI was found to be 0.26% at scene, 1.23% in transit, and 0.28% in ED. When these frequencies were compared pair-wise between the in field group and the in transit group and between the in transit group and in the emergency department group, there were significant differences. PEI was associated with increased frequency of death for successfully and PEI patients respectively, scene: 57.7% vs 66.7%, in transit: 46.1% vs 66.7% and ED: 34.2% vs 53.3%. In survivors, there was a trend towards worsening neurological function in all patients who had PEI, however this difference was only statistically significant in field intubated patients (for expression, feeding, locomotion and social interaction) and for ED intubated patients (for social interaction). The frequency of a number of other hospital complications were without any trend.

Discussion: These data emphasize the importance of recognizing esophageal intubation and correction as soon as possible. It is possible that the number of patients with esophageal intubation by prehospital providers may be greater than that recorded if the patient died in the emergency department and the esophageal intubation was not discovered. The severity of neurofunctional deficit in patients with esophageal intubation by prehospital providers may be a reflection of the duration of unrecognized esophageal intubation. We suggest that continuous capnography may be an important tool to support the identification of esophageal intubation and preventing these outcomes.

OREGON EMERGENCY MEDICAL TECHNICIANS' PRACTICAL EXPERIENCES AND ATTITUDES REGARDING THE PHYSICIANS ORDERS FOR LIFE SUSTAINING TREATMENT (POLST) PROGRAM

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Objectives: Oregon has developed a form that allows patients with serious medical conditions to express their wishes for treatment. The purpose of this study was to evaluate EMTs' experiences with the POLST (Physician Orders for Life-Sustaining Treatment) Program, identify barriers to its use and learn about EMTs' attitudes regarding its effectiveness.

Design: An anonymous survey mailed to a stratified random sample of 1048 Oregon EMTs.

Participants: 572 Oregon EMTs (55% response rate) who were 76% male, 66% paramedics, with a mean hours worked per week of 45 (SD 20.1). Measurements: A five-section survey with questions regarding demographics (8 items), experiences with the POLST form (4 items), the most recently treated patient with a POLST form (7 items), opinions about the POLST Program rated on a Likert scale (10 items), and 3 open-ended questions to identify barriers to use.

Results: Most respondents (73%) had treated at least one patient with a POLST form and 74% reported receiving some education about the POLST Program. The majority of patients (71%) with POLST forms were in assisted living or other long-term care. In 45% of cases where a POLST was present, EMTs reported that it changed treatment. Seventy-five percent of the respondents agreed that the POLST form provides clear instructions about patient's preferences and 93% agreed that the POLST form is useful in determining which treatments to provide when the patient has no pulse and is apneic. Fewer (63%) agreed that the form is useful in determining treatments when the patient has a pulse and is breathing. Most (78%) respondents expressed the wish that more patients used the POLST form.

Conclusion: The majority of Oregon EMTs have experience with the POLST Program. EMTs find the POLST form useful in making treatment decisions for patients with advanced illnesses and often use it, when present, to change treatment decisions.

EMERGENCY MEDICINE IN ISRAEL – A YOUNG PROFESSION WITH MAJOR EXPERIENCE

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Emergency Medicine (EM) combines the knowledge of medicine in all fields, most of the time with immediate response to life threatening situations to individuals and groups. The Israeli Medical Association (IMA) recognized EM as a separate specialty in medicine in 1996. With the acknowledgment of EM as a profession in medicine, there is a growing need to develop educational and training programs based on universal standards to all EM staff. Although Israel is a very small country with a very young EM as a profession, the reality brought us to a stage of major experience related to EM as well as Mass Casualty Incidents (MCI). These experiences brought us to develop and establish the Center for Resuscitation and Emergency Medicine Education (CREME). CREME provides different levels of resuscitation and emergency medicine education to medical professionals as well as to non-medical persons all over the world. The paper presents the changes in EM in Israel with the acknowledgment of EM as profession as well as the as possibilities to help with other development emergency services upon our experience.

FAMILY PRESENCE DURING RESUSCITATION OF ADULTS

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Objectives: Family presence during resuscitation of adult patients infrequently occurs in the United Kingdom (UK). Research into the reasons behind this practice has been inadequate. This study sought to identify the factors influencing physician opinion on this matter.

Methods: An anonymous questionnaire was sent to doctors of all grades in two district general hospitals in the UK. The specialities included were anaesthesia, emergency medicine (EM), acute medicine and acute surgery. All doctors were asked whether they approved of family presence during adult resuscitation. Factors that may influence opinion were enquired about, including fears of family members witnessing errors, increased litigation and more prolonged resuscitation. Proportions were compared by the ÷2 test using NCSSTM (Number Crunching Statistical Systems, 2001 Edition).

Results: Responses were received from 147 out of 256 doctors (response rate 57.4%). By speciality, responses were received from 40 doctors in EM, 30 in anaesthesia, 38 in the acute medical specialities and 39 in the acute surgical specialities. Doctors in EM were significantly more likely to approve of witnessed resuscitation compared to doctors in the other specialities ($p<0.001$). There was a trend towards approval amongst the higher grades of doctors but this was not significant. Fears of more prolonged resuscitation with family presence and errors noticed by family members did not influence approval. However, fear of litigation was associated with disapproval ($p<0.001$), particularly amongst doctors not in EM ($p<0.05$). Doctors of lower grade had greater concerns regarding errors being noticed and litigation ($p<0.001$ and $p<0.05$ respectively). Other concerns expressed by doctors included emotional trauma to relatives, distraction of resuscitation team, lack of space, and lack of staff to look after relatives.

Conclusions: Approval of family presence during resuscitation of adults depends on how comfortable doctors are in these situations. In the UK, doctors in EM deal with the majority of out of hospital medical and trauma resuscitations, and therefore appear to be more comfortable with family presence. While no evidence exists to suggest that family presence would result in greater litigation, it is an important factor influencing opinion.

FOUR HOUR ACCIDENT AND EMERGENCY WAIT – CAN IT BE ACHIEVED IN THE UK?

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Introduction: The NHS plan sets out an ambitious

programme that by 2004 no one is to wait more than 4 hours in an Accident and Emergency (A&E) department. At present at least 25% of patients still wait more than 4 hours within the department. The Way Forward document by the British Association of A&E Medicine suggested that a Senior House Officer (SHO) should see about 5000 patients per year.

Objective: To assess a real world working model of an A&E department and correlate the number of patients assessed with the number of doctors working in the year 2002/2003.

Method: This study was carried out at City Hospital, Birmingham where 87,000 new patients were seen during the year 2002-2003. The A&E department was manned by 3 Consultants, 4 Specialist Registrars, 2 Staff Grades and 12 SHOs. The number of patients assessed by each individual doctor was recorded on a monthly basis and this data was analysed.

Results: On average 240 patients were seen per day in the department with no more than 6 SHOs working in 24 hours. On average a SHO assessed no more than 1.46 patients per hour ranging from 0.7 patients/hour to 2.4 patients/hour. The total numbers of patients seen by the SHOs in a day were on average 87 patients. The remaining 153 patients were seen by the 3 middle grades and the consultants. No more than 85% of patients were seen within 4 hours in any given period.

Conclusions: This study shows that SHOs, who make up maximal doctor numbers, are expected to see the majority of patients attending an A&E department. However in reality they each take care of no more than 2500 patients per year. The data clearly shows that the majority of patients are dealt with by the middle grade doctors. This study shows that the 4 hour waiting time laid out by the NHS is an achievable target but will require most A&E departments to increase the number of middle grade doctors and increasingly efficient junior doctors.

MULTICULTURAL APPROACH TO THE PATIENT IN THE EMERGENCY DEPARTMENT

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The Emergency Department is often the first interface with the medical system for patients visiting or immigrating to a new country. The mobility of our times and the immigration flows has led to an unprecedented variety of cultures and languages that the Emergency Physician has to work with on a daily basis. A systematic approach to understanding the issues surrounding a multicultural patient encounter is described, based on the author's extensive experience working within the largest Emergency Department in Quebec, which receives the majority of new immigrants to the city and registers visits from patients speaking more than 254 languages or dialects per year. The proposed approach is very versatile and useful to an emergency physician from any country, as it provides a scheme to approach an encounter with a patient from any background (illustrated with multiple examples) as opposed to providing information on cultural aspects from a limited pre-selected number of cultures. It is based on three key themes: Communication, Culture and Consideration that are easy to understand, remember and apply in practice. The main benefits are an improved patient-physician communication, a decrease in the number of medical errors due to misunderstanding of patient complaints or attitudes as well as a gain in time efficiency. It has been shown to be useful both for physician use and the teaching of residents.

INFORMED CONSENT: OPINIONS OF THE HEALTH CARE PERSONNEL FROM A TEACHING HOSPITAL

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Objective: To study the ethical aspects and opinions of health care personnel on the information given to patients in order to obtain informed consent. Methods: A total of 277 participants fulfilled an anonymous 20-item questionnaire. The degree of knowledge of legal health care regulations on patient's informed consent was assessed.

Results: Sample description: The most frequent age group was 25-34 years (42.2%). 54.2% of subjects were physicians, 31% registered nurses, 10.5% assistants/technicians, and 4.3% other occupations. With regard to years of practice, 32.1% had been practicing for 1-5 years, 22.4% for > 20 years, 19.5% for 11-15 years, 14.4% for 6-10 years, 8.7% for 16-20 years (not stated in 2.9%). Specialties of the participants included medical in 40.8% of cases, critical care (ICU and anesthesia) in 30.3%, surgical in 13.7%, and other in 15.2%. A total of 32.9% of participants had attended bioethical courses. Response to the survey: 45.1% of health care professionals believed that they had insufficient information on informed consent and when it should be completed. Four fundamental aspects should be included: information (96.7%), comprehension (93.5%), willingness (84.1%), and competence (74%). Other considerations included that informed consent is an instrument of professional protection against demands of the part of the user (81.2%), of difficult reading for the average person (76.2%), that information is not clearly explained to the patient (62.8%), and that sometimes contains excessive information (37.9%). Participants believed that side effects of a diagnostic or therapeutic intervention should be specified (98.9%), without percentages (59.6%), as well the likelihood of success (57%) and alternatives (79.8%). In respect to procedures for which informed consent should be included were only some non-invasive diagnostic maneuvers (lumbar puncture, 69.3% or thoracentesis 63.2%), all invasive procedures except for insertion of a central intravenous line (49.8%), all therapeutic interventions, and diagnostic/therapeutic interventions of questionable effectiveness (52%).

Conclusions: A large percentage of health care professionals were unaware of what informed consent was; it's different parts, the law that regulates it, and the philosophy under which the instrument was developed. Opinions were plural and many times, paternalistic. In order to solve the problem of the lack of knowledge of informed consent, continuing education promoted by the ethical committees is urgently need to attain a change of the traditional paternalistic model to an autonomic model of respect to the freedom and individuality of each patient.

ANALYSIS OF PATIENTS WITH SKULL FRACTURES AND TRAUMATIC BRAIN INJURIES IN CHILDREN ADMITTED TO THE EMERGENCY DEPARTMENT WITH HEAD INJURY

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Objective: To determine whether clinical symptoms and

signs of brain injury are sensitive indicators of traumatic brain injury (TBI) and skull fracture (SF) in pediatric patients admitted with head trauma.

Methods: A retrospective cross-sectional analysis of all patients younger than 17 years of age admitted to the University-based pediatric Emergency Department (ED) with acute head trauma during a 7-year period was conducted. All children who were admitted into hospital had a TBI 131 (47.3%) and/or SF 146 (52.7%) were included in the study. Head computed tomography (CT) was obtained and data, comprising mechanism of injury, symptoms, and physical findings, Glasgow Coma Scale (GCS) score, mental state, the specific injuries, the treatment administered, the late complications and the findings on discharge were recorded.

Results: 277 of 1167 patients with the chief complaint of head trauma were admitted with the diagnosis of TBI and/or SF as identified with CT. Isolated TBI was found in 50 patients (18.1%), isolated SF in 146 patients (52.7%) and both TBI and SF in 81 patients (29.2%). 88.9% children with head trauma had scalp contusion or hematoma. 132 (54.5%) of the patients who had TBI and/or SF had vomiting. Forty-two (15.2%) patients who had TBI and/or SF fell from a height below 1.5 m. Twenty-five (33.3%) of the patients under the age of two were injured as a result of a fall from a height of less than 1.5 m and this was a very common mechanism of falls in this group of age. 102 (55.4%) of the patients had a GCS score of 15. 45 (44.6%) patients who had only TBI had also a GCS score of 15. 37 (%75.5) of the subjects with epidural hematoma had normal neurological examination and neurologically intact on presentation.

Conclusions: Detection of a normal neurological examination, absence of both altered mental status and a history of loss of consciousness do not rule out TBI. Vomiting and severe trauma mechanisms are important risk factors in TBI and SF although not significant predictors of intracranial injuries. Scalp hematoma can be a predictor of TBI.

A PROFILE OF TERROR-RELATED TRAUMATIC INJURY IN CHILDREN

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Background: Not much data is available on terror-related trauma in the pediatric population and its effect on the healthcare system.

Methods: Data on all patients of age less than 18 years old who were hospitalized between October 1, 2000 and December 31, 2001 for injuries sustained in a terrorist attack were obtained from the Israel National Trauma Registry. Parameters evaluated included patient age and sex, diagnosis, type, mechanism and severity of injury, inter-hospital transfer, stay in intensive care unit, duration of hospitalization, and need for rehabilitation. Findings were compared with the general pediatric population hospitalized for non-terror-related trauma within the same time period.

Results: During the study period, 138 children were hospitalized for a terror-related-injury and 8363 for a non-terror-related injury. The study group was significantly older [mean age 12.3 years (SD = 5.1) versus 6.9 years (SD = 5.3)] and sustained proportionately more penetrating injuries [54% (n=74) vs. 9% (n=725)]. Differences were also noted in the proportion of internal injuries to the torso (11% in the patients with terror-related trauma versus 4% in those with non-terror-related injuries], open wounds to the head (13% vs. 6%), and critical injuries (Injury Severity Score of 25+) (25% vs. 3%). The study group showed greater use of intensive care unit facilities (33% vs. 8% in the comparison group), longer median hospitalization time (5 days vs. 2 days) greater need for rehabilitative care (17% vs. 1%).

Conclusion: Terror-related injuries are more severe than non-terror-related injuries and increase the demand for acute care in children. These data have implications for treatment and for the preparedness of hospital resources and training to treat patients following a terrorist attack.

FOLLOW-UP OF HOME ACCIDENT PATIENTS AND UTILIZATION OF HOME VISITING NURSES AS A MEAN TO DISCLOSE CHILD ABUSE OR NEGLECT

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Child accidents are quite common and can be the presenting symptoms of abuse or neglect. The goal of this study was to define the pediatric population at risk for neglect and abuse by means of follow-up of pediatric patients who were examined in The Pediatric Emergency Unit at the E. Wolfson Medical Center for all kinds of home accidents.

Methods: A special form was drafted for follow-up of patients who arrived at the Emergency Medicine Unit due to home accidents. Included in the study were all home accidents such as: drug over-dose, ingestion of poisonous substances, accidental ingestion of drugs, ingestion of corrosive substances, ingestion of hydrocarbons and other volatile substances, accidental falls, burns, electric injuries and any other kind of home acquired injury. The examining pediatrician filled the form, and a social worker was informed. In the following day the forms were collected by the social workers and the personal data was entered in the social workers data - base. Three risk groups of accident victims were formed (e.g., high risk, medium risk and low risk).

Result: During the initial 2.5 months of the study there were 69 reported home accidents. 6 (8.70%) were classified as high risk and were reported to the welfare authorities for further treatment. 24 (34.78%) were classified as medium risk and were evaluated by a home visiting nurse. Among those 24 patients two were neglected children and 4 more didn't get any of their immunizations.

Conclusion: Follow-up of home accident cases and the utilization of home visiting nurses is another mean to disclose and prevent abuse and neglect in this population.

HAEMODYNAMIC CHANGES AFTER SEVERE PAEDIATRIC HEAD TRAUMA

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Objective: To study haemodynamic variations, in 1st by admission in paediatric intensive care unit (PICU), in severe brain injured children and compare with a non-trauma control group. Design: Prospective clinical study with case control

Setting: PICU, 9 pts aged 11months-16yrs, medium weight=32kg, suffering severe head trauma (GCS<8)= A group, 9 critical pts control B gr: 16months-12yrs old, medium weight=22kg.Analgo-sedation standard (remifentanil-midazolam) Exclusion criteria: A gr: GCS=8; B gr: septic, haemorrhagic, spinal shock. Statistical analysis: T-test, medium, SD.

Measurement and Results: Volumetric monitoring (Pulsion PiCCO®) in the 1ST hr IN PICU. Significant low values ($p<0.01$) were revealed for MAP and SVRI in A gr. Cardiac performance parameters showed a normal values in each group with better contractility parameters for A group except for CFI.

Discussion: We have seen a significant reduction of MAP and SVRI, that are main indexes of a good cerebral perfusion, although these parameters are in a normal range in A gr, but are more low than B gr. The cardiac performance indexes are better in A gr in accordance with an after-load reduction, except that for CFI. This parameter is an independent load index of cardiac function; our results show a reduction of 12.2% in A group, although without statistical significant differences.

Conclusion: Severe brain injury is related, in the first hr after admission in PICU, with alteration of cardiovascular and sympathetic system that is evident for the significant reduction of SVRI and MAP with a low CFI, that is an independent load contractility index. The absence of critical variation of haemodynamic profile is related to the maintenance of a good volemic status in A group than B group that showed a reduction of ITBVI.

PREHOSPITAL CARE IN PAEDIATRIC PATIENTS- 3 YEARS OF EXPERIENCE

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Objectives: Trauma is the most frequent cause of death in paediatric age. The authors reviewed 3 years experience of emergency care delivered to children in a prehospital setting.

Material and methods- The present paper analysis retrospectively clinical data of 121 paediatric trauma victims, who were approached in the prehospital setting, between March 1998 and February 2001. The variables where: age, sex, assessment of cause, type of injury and delivered care.

Results: The majority of children (n=70, 58%) were 9 years old or more. There was a male predominance (76‰; 51). Most of the trauma cases (83%) occurred in the street, being the main cause (64%) secondary to road traffic accidents (40 cases were pedestrians, 37 were passengers in vehicles). The following injuries were found: 84 head trauma, 19 thoraco-abdominal trauma, 8 spinal cord injuries and 53 with extremities involvement. Performed emergency care included: immobilization (n=59), fluid resuscitation (n=65), high-flow oxygen delivery (n=37), tracheal intubation (n=11), analgesics (n=20). There were registered 4 deaths (3%).

Comments: Most of the traumatic lesions were secondary to traffic accidents. Head trauma is common among paediatric lesions. Morbidity and mortality in this case study are not negligible. Thus the importance to improve prevention measures and specific education on emergency management of injured children.

MARKERS OF METABOLIC CRISIS IN METHYLMALONIC ACIDEMIA. DILEMMA IN ED

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Methymalonic Acidemia (MMA) is a rare organic acid disorder that presents with metabolic crisis associated with significant morbidity and mortality. Children with MMA frequently present to the emergency department with a variety of different clinical complaints. However the most common endpoint of these clinical scenarios is metabolic crisis in these patients. Inadequate treatment of these metabolic crises can precipitate significant complication e.g. neurological damage, renal failure, hemodynamic insufficiency etc. Early recognition and aggressive resuscitation of these metabolic crises can avert the ongoing crisis and improve the neurological outcome in these patients. We present data collected during 35 episodes in 22 patients with MMA who presented to our emergency department as metabolic emergencies.

Material And Methods: A total of 35 episodes in 22 patients known to have MMA, presenting to our ED were reviewed. Patients were aged between 6 months-12 yrs. In 27/35 episodes presenting complaint was vomiting with poor oral intake. No other s/s was present. All had normal physical exam. Laboratory investigations showed electrolytes in normal limits. Serum Ammonia was elevated in 18/35 episodes. Urinary Ketones were measured and found to be positive (value3+) in 33/ 35 episodes. Patients were treated in ED. The presence of urine ketones dictated the duration of treatment and disposition in ED. The end point of treatment was the clearing up of ketones from the urine.

Results: All patients were treated with hydration, carntine. In 15/35 episodes patients were admitted and the rest 20/35 were managed as outpatients. Subsequently 3 needed admission.

Conclusion: The results indicate that urine ketones was the first biochemical abnormality noted 33 (97%) when all other parameters were normal. History and physical exam were unreliable in detecting early phase of metabolic crisis. This finding can aid in early recognition of these metabolic crises thereby facilitating earlier therapy and resolution of these crisis. Early detection may help avoid the significant morbidity and mortality associated with these episodes and improve the long-term outcome.

INCORPORATION OF TROPONIN T IN THE PREHOSPITAL EVALUATION OF CHEST PAIN

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Objective: Determination of the markers of myocardial damage is an important diagnostic and prognostic element in the management of chest pain. This paper aims to evaluate the feasibility of the quantitative pre-hospital determination of Troponin T (TnT) and its diagnostic and prognostic value.

Methods: Patients over 25 years of age seen by the prehospital emergency services for acute chest pain were included. Apart from the clinical variables, electrocardiogram

(ECG) and semi-quantitative TnT measurement (TnT- <0.05 ng/ml, TnT+ for values between 0.05 and 0.1 ng/ml and TnT++ => 0.1 ng/ml) were performed. Follow-up was performed on admission and at six months, with descriptive statistical and survival analyses.

Results: A total of 597 patients were included in the final analysis. The mean age was 66 years and 61.3% were male. The TnT determination was positive in 71 (11.9%) cases, 22 TnT+ and 49 TnT++. The final diagnosis was of Acute Myocardial infarction (AMI) or Unstable Angina (UA) in 60 (84.5%) of these 71 patients. In the first six months, 53 (8.9%) patients died. Of these, 19 had positive TnT results (5 TnT+ and 14 TnT++). The mortality at six months was significantly higher in older patients or in those with positive TnT values or with the hospital diagnosis of AMI or UA. TnT behaved as an independent predictive variable for mortality.

Conclusions: The accurate semi-quantitative determination of TnT is possible in the pre-hospital setting and provides an objective datum directly related to the final diagnosis and to the patient's prognosis.

RESULTS OF THE INTRODUCTION OF AN AUTOMATICAL EXTERNAL DEFIBRILATION (AED) PROGRAM FOR EMERGENCY MEDICAL TECHNICIANS (EMT) IN GALICIA

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Objectives: We describe the plan and development of a programme for the introduction AED for EMTs and to show the results of the first months of activity in an eminently rural community.

Methods: Exposition of the plan selected for introduction including aspects of logistics, training and control. We examined cardiorespiratory arrests, which were treated in basic life support ambulances equipped with AEDs, from 1 of March to 31 of December 2001.

Results: Our country has a complete pioneering legislation. Currently, there are 58 AEDs in operation and 27 are planned for immediate introduction. 967 EMTs have been trained, 85 % of the total amount in the community. In 100 % of the cases, a thorough control of the quality of the service in which AEDs used was carried out. 12% of the patients, who were victims of sudden cardiac death and are found in ventricular fibrillation (VF), survive and are discharged from hospital. However, the percentage of patients to be found in VF is only around 26%. This translates, on the one hand, into long assistance time intervals (from the call to the arrival on site), but above all, into an important delay from the moment in which circulatory collapse takes place until the emergency service 061 is called, more than 5 minutes in half the cases.

Conclusions: The programme followed for the introduction of AEDs in Galicia was adapted to the socio-demographic characteristics of the population and the out-of-hospital emergency assistance model developed, executed and controlled by PEHF-061. The global results of our first 10 months with the AED programme were the expected ones. In general, they are comparable to those published; however, ways of shortening the times from the point of collapse to defibrillation must be found, mainly by training the population and through the extension of AEDs to other communities.

EL RETRASO PREHOSPITALARIO EN EL MANEJO DEL SÍNDROME CORONARIO AGUDO. PROYECTO ARIAM

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Introducciòn: En el manejo extrahospitalario del síndrome coronario agudo (Infarto Agudo de Miocardio vs. Angor inestable) es muy importante el tiempo de demora entre el inicio de la sintomatología y la atención hospitalaria.

Objetivos: E studio del retraso prehospitalario,desde el inicio de los síntomas hasta la llegada al hospital de referencia,averiguando la influencia que tiene en esa demora la utilización de los sistemas sanitarios extrahospitalarios.

Métodos: Estudio descriptivo evaluando motivo de ingreso, modo de acceso al sistema hospitalario y tiempo de demora, empleando para esta última la medida de la mediana. Entendemos por tiempo de demora el retraso desde el inicio de la clínica hasta la llegada al primer hospital. El período temporal abarca desde 1-Junio-01 hasta 31-Diciembre-2001; y se trata de pacientes incluidos en el PROYECTO ARIAM.

Resultados: De un total de 113 pacientes,el 20% eran anginas inestables y el 80% IMA. El retraso global en la llegada al primer hospital fue de 135 minutos. Si el paciente acude directamente al hospital de referencia el retraso estimado es de 120 minutos aproximadamente (44,25% pacientes). Si el paciente acudía en primer lugar al sistema sanitario extrahospitalario el retraso es de 150 minutos,incluyéndose en este grupo 63 pacientes (55,75%).

Conclusiones: La utilización de los sistemas sanitarios extrahospitalarios provoca un retraso en la atención hospitalaria de los pacientes con síndrome coronario agudo,aunque ésta es la forma más comúnmente empleada por dichos pacientes para acceder a la atención hospitalaria.

DELAY IN THE ACCESS TO THE HOSPITAL OF PATIENTS WITH ACUTE MYOCARDIAL INFARCTION (AMI). ANALYSIS OF REGISTRY RESIM DATA (REGISTRY OF ACUTE MYOCARDIAL INFARCTION IN THE EMERGENCY SERVICES OF SPAIN)

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Aims: The fibrinolytic treatment in the AMI with ST-segment elevation obtains maximum benefits in the first two hours since the symptoms star. The delays in the Hospital admittance are due to the patient himself (delay in the request of medical assistance) and to the arriving time. The main objective of this study is to analyze if the existence of previous coronary events (PCE) o coronary risk facts (CRF) affects in a quicker access to the hospital of the patients suffering an AMI.

Methodology: We took the 1974 patients data included, from January 2001 to May 2003, in the national registration RESIM with the participation of 27 Spanish hospitals. To analyze the relation between variables PCE and CRF with the global prehospital delay has been used an average comparison, applying a non parametric test (U of Mann-Whitney).On the other hand, to analyze the prehospital emergency system we have calculated the Chi-square of Pearson.

Results: We took the 1974 patients (1467 men and 503 women), aged average of 66,1 year (SD 13,5). On 1741 patients (88.19%) there were known coronary risk factors. 487 patients suffered previous coronary events (24.67%). The global prehospital delay was of 137 minutes (median; percentile 25: 72 minutes, percentile 75: 270 minutes). None of both variables (PCE and CRF) had any influence on a faster access to the hospital (PCE: U of Mann-Whitney p= 0.067; CRF: U of Mann-Whitney p=0.576) nor in the use of prehospital emergency system 061 (chi-square; CRF: p=0.768; PCE: p=0.377).

Conclusions: 1. Prehospital delay of RESIM patients is high, with a median above two hours. 2. The existence of risk factors o previous coronary events has no influence on a quicker access to the hospital. 3. We consider necessary to develop specific programs for emergency assistance meant for this group of patients in order to reduce the prehospital delay in the presence of evocative symptoms of AMI.

IS IT POSSIBLE TO REDUCE THE HOSPITALARY DELAY IN THE ADMINISTRATION OF FIBRINOLYTIC TREATMENT IN THE ACUTE MYOCARDIAL INFARCTION (AMI)? ANALYSIS OF REGISTRY RESIM DATA (REGISTRY OF ACUTE MYOCARDIAL INFARCTION IN THE EMERGENCY SERVICES OF SPAIN)

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Aims: The early fibrinolytic treatment in the AMI with ST-segment elevation improves significantly the prognostic. We have proposed the Fibrinolysis Index (FI) during the first and second hours of the symptoms evolution, as a quality indicator of the assistance in the AMI, setting as a goal standard the 15% and the 50% (ARIAM group: Analysis of the delay in the acute of myocardial infarction). The object of this research is the knowledge of the FI in the Hospital Emergency Services (HES) and to analyzing the strategies to improve them.

Methodology: We took the 1974 patients data included, from January 2001 to May 2003, in the national registration RESIM with the participation of 27 spanish hospitals. The following variables were analyzed: Assistance time, ARIAM Priority, reasons no to realize fibrinolysis in the emergency service (ES), and the FI during the first and second hour.

Results: The global prehospitalary delay was of 137 minutes (median; percentile 25: 72 minutes, percentile 75: 270 minutes). The ARIAM Priority distribution was: Priority I 41.24%, Priority II 40.98%, and Priority III 17.78%. Time of arrival to hospital and ECG applied was of 7 minutes (median; percentile 25: 4 minutes, percentile 75: 15 minutes). 791 patients (40,07%) received fibrinolytic treatment in the ES with the following results; Priority I: 457, Priority II: 321, Priority III: 13. The door to needle time was of 29 minutes (median; percentile 25: 17 minutes, percentile 75: 50 minutes). The main reasons no to realize fibrinolysis were the transfer to the Coronary Unit (592 patients), the delay (239 patients), and due to not to have available the fibrinolytic drug in the ES (165 patients). The FI in the ES amounted to 8,36% in the first hour and the 34,73% in the second hour.

Conclusions: 1.- The fibrinolysis Index are under standards. 2.- The door to needle is proper. Specific studies are necessary to reduce the prehospitalary delay and/or improve the prehospitalary fibrinolysis. 3.- We consider necessary to increase the number of patients in Priority I treated in the ES before were transferred to the Coronary Unit and hability the disposal of the fibrinolytic drug in the same ES.

DE LA PATERA AL HOSPITAL: LA NUEVA URGENCIA

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Introducción: La proximidad de la isla de Fuerteventura a la costa africana y el aumento de los inmigrantes que llegan a la misma en patera en busca de una vida mejor, está ocasionando una nueva demanda asistencial en los servicios de urgencia, hasta ahora desconocida. Aunque en la mayoría de los casos no constituye una verdadera urgencia médica, sí supone una urgencia social que por desconocimiento en su manejo provoca saturación de los servicios y un mal uso de los recursos disponibles. Con todo hemos querido dar una visión global del paso de los inmigrantes por el servicio de urgencias del único hospital de la isla.

Objetivos: Describir el perfil del inmigrante que atendemos en el servicio de urgencias del Hospital General de Fuerteventura, conocer los motivos de consulta y nivel de prioridad de atención, además de medir los tiempos de estancia en el servicio y sus destinos al alta.

Material y método: Es un estudio retrospectivo y longitudinal, en el que analizamos de forma descriptiva una muestra de los inmigrantes atendidos en nuestro servicio tras llegar a la isla en patera. Dicha muestra incluye 100 inmigrantes, de un total de 432 atendidos en el servicio entre el 15 de septiembre del 2001 y el 15 de septiembre del 2002. La recogida de datos incluía la revisión de los registros de enfermería de urgencias y otros datos obtenidos en los servicios de control de gestión y de admisión del hospital.

Resultados: De los 30.832 pacientes atendidos en urgencias en el periodo de estudio, 432 eran inmigrantes, lo que supone el 1.4% de las urgencias atendidas. De los 100 casos estudiados resultaron 68 varones y 32 hembras, con una media de edad de 25,4 años. La procedencia era en un 68% sudsahariana y un 32% magrebí. Entre los motivos de consulta destacaban el malestar general (36%) y el dolor abdominal (32%) y en menor medida los traumatismos (10%), fiebres sin foco (5%), cefaleas (4%) y disnea (2%). Además el 12% eran gestantes mal controladas. De ellos se consideraron 30 urgencias agudas y 3 agudos inestables, mientras el resto fueron no agudos-demorables. En cuanto a los tiempos de estancia en el servicio el 37% estuvo de 1 a 4 horas y otro 20% menos de 45 minutos. 83 fueron dados de alta antes de 24 horas y 15 ingresados en planta.

Conclusiones: El perfil del inmigrante africano de patera es de un individuo varón, de raza negra, entre 19-27 años y de procedencia sudsahariana. Las malas condiciones del viaje desde la costa africana hasta la isla suponen un gran desgaste físico y psíquico para el inmigrante. El principal motivo de consulta fue el malestar general, entendiendo como tal a debilidad, frío, náuseas, vómitos, palpitaciones... Del total de la población de estudio, tan sólo tres precisaron de una asistencia inmediata por clasificarse como agudo inestable, mientras que el resto fueron urgencias demorables. Llama la atención el número de mujeres embarazadas que se embarcan en esta aventura pese al riesgo, dos de las cuales dieron a luz en las primeras 24 horas. El promedio de estancia en el servicio oscila entre 1-4 horas, siendo el destino más habitual el alta domiciliaria.

Palabras clave: Fuerteventura, isla, urgencias, inmigrante africano y patera.

TRASTORNOS PSICOLÓGICOS DEL INMIGRANTE EN UN SERVICIO DE URGENCIAS. (SÍNDROME DE ULISES)

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Introducción: Más de 340.000 extranjeros viven en Cataluña, cifra triplicada en los últimos cinco años. En este colectivo la salud mental puede representar un problema importante. Un estudio de Médicos del Mundo en 1.999 reveló que el 90% de las enfermedades de los inmigrantes estaban causadas por condiciones de estrés y de inestabilidad emocional, laboral y económica. El Dr. Achotegui describe como Síndrome de Ulises, al conjunto de males psíquicos y físicos que afectan a los inmigrantes, causados por una mezcla de desadaptación, sensación de fracaso, confusión, miedo, despersonalización, soledad y desarraigo. Nuestro hospital tiene un área de influencia de aprox.230.000 habitantes. Mataró, su capital tiene 105.000 habitantes, representando la población legal ("con papeles") de origen Magrebí y subsahariano el 5,5% del censo.

Objetivos: Cuantificar e identificar la demanda asistencial en salud mental de los inmigrantes magrebís y subsaharianos, atendidos en el servicio de urgencias (SU) del Hospital de Mataró y valorar si puede establecerse relación con el Síndrome de Ulises.

Metodologia: Estudio descriptivo, de las consultas del grupo de población inmigrante magrebí y subsahariano atendido en nuestro SU, unidad de salud mental, durante el año 2.002. Analizamos datos sociodemográficos y grupos de patología según clasificación DSM-IV, determinando si se identifica el Sdme. de Ulises, que relaciona inmigración con sintomatología como: ansiedad, depresión, tristeza, temores, irritabilidad, trastornos disociativos, psicosomáticos e incluso psicóticos.

Resultados: Nuestro SU atendió el año 2002 más de 109.000 consultas. Un 7% del total son pacientes de la población inmigrante estudiada (55% hombres) con un índice de ingreso del 7,97 %. El resto de la población representa el 93% de las consultas (48% hombres) y su índice de ingreso es del 9,96%. Del total de ingresos el 5,6% son africanos (4,3% suprimiendo partos) y 94,4% del resto de población. La unidad de salud mental atendió 1315 consultas (1,2% del total), con una media de edad de 36 años. Por sexo 50,4% hombres con una media de 36 años y 49,6% mujeres con una media de 38,4 años. El porcentaje total de ingreso fue del 19,8%, de los cuales 53,6% hombres y 46,4% mujeres. Por sexo el índice de ingreso en la mujer es del 18,96% y en el hombre del 23,21%. Del grupo poblacional causa de estudio, se atendieron 55 consultas (42 pacientes), lo que representa un 4,18% del total. La media de edad es 29,4 años. Por sexo 34 hombres (61,8%), con una media de 29,4 años y 21 mujeres (38,2%), con una media de 29,5 años. Por grupos de patología DSM-IV: T.psicótico 26 (47.3%), T.adaptativo 9 (16.36%), T.disociativo 8 (14.5%), T.bipolar 5 (9.1%), T.por alcohol 5 (9.1%), T.por cocaína 1, T.distímico 1. Ingresaron 15 pacientes (5,32% del total de ingresos psiquiátricos) siendo el índice de ingreso hospitalario de este grupo del 27,3%, un 53,3% hombres y 46,7% mujeres. Por sexo el índice de ingreso en la mujer es del 33,3% y en el hombre del 23,5%. Las causas de ingreso fueron: T.psicótico 13 (86.7%)7 hombres y 6 mujeres,T.adaptativo 1,T.disociativo 1.

Conclusiones: - El porcentaje de consultas psiquiátricas del grupo de población inmigrante estudiado, está próximo en proporción al de la población general pero el perfil de paciente es diferente, tiene una edad significativamente más joven, existe un predominio significativamente mayor de consulta por parte de hombres y el índice de ingreso es mayor en las mujeres, mientras que en el resto de población las consultas son proporcionales para ambos sexos con un índice de ingreso superior en los hombres. - Al contrario que en el resto de especialidades, existe un índice de ingreso por causa psiquiátrica en el grupo de inmigrantes superior al global de población, debiéndose fundamentalmente a la barrera idiomática, el bajo soporte familiar y el riesgo de incumplimiento terapéutico. - La patología prevalente es el trastorno psicótico, que además representa casi el 87% de los ingresos. - Por la sintomatología de los grupos de patología prevalentes, el alto índice de ingreso hospitalario y las diferencias de perfil del paciente psiquiátrico del grupo de inmigrantes respecto al general, pensamos que puede identificarse una relación del Sdme. de Ulises con la patología mental de nuestra población inmigrante magrebí y subsahariana. - Debemos utilizar mediadores culturales y terapias psicosociales que ayuden al enfermo a reorganizar su vida relacional y social.

IMPLICACIONES EN LA COMUNIDAD DESPUÉS DE LA ELABORACIÓN DEL PROTOCOLO DE ATENCIÓN A LA MUJER VÍCTIMA DE MALOS TRATOS

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Introducción: Nuestro hospital desde el año 2001 posee el protocolo de "Atención a la Mujer Víctima de malos tratos". Dentro de la actividad del Servicio siempre nos ha preocupado ir mejorando la calidad asistencial. Ya en 1998 detectamos y pusimos en evidencia la incidencia dentro de nuestra población de violencia doméstica, días, horas en que acudían y tipo de lesiones. Con la finalidad de garantizar una continuidad en la atención de estas pacientes nos pusimos en contacto con los organismos municipales de las comunidades de las cuales somos hospital de referencia, y así poder ser parte integrante de los circuitos municipales de atención a las víctimas de violencia domestica.

Objetivo: Demostrar la importancia que ha tenido la implantación del "Protocolo de atención a la víctima de malos tratos", tanto para nuestros profesionales, como para la población que se encuentra en nuestra área de influencia.Material y métodos: para poder dar una respuesta

correcta a esta problemática se plantaron acciones a tres bandas:
- Preparación personal.
- Preparación en el ámbito institucional o departamental: Elaboración e implantación del Protocolo, realización de sesiones abiertas al personal sanitario de la comunidad, participación en los programas docentes de Formación continuada, realización de jornadas para los estudiantes de enfermería, inclusión dentro de los programas de Doctorado, difusión a todos los responsables de servicio del Hospital y de las diferentes áreas de soporte, participación en forums de tipo sanitario.
- Conexión con la comunidad: Se creo una base de datos específica que nos permite saber el origen de las pacientes, esto nos ha permitido incidir en aquellas comunidades en las que había más dificultad de enlace a la hora de realizar una derivación de la paciente a los circuitos integrados. Hemos participado activamente en la elaboración de tres circuitos de atención integral a los casos de violencia doméstica.

Resultados: En el año 2002 se han atendido 303 casos de agresiones a mujeres de las cuales 146 corresponden a casos de violencia doméstica. La mayor incidencia se daba en los municipios de l'Hospitalet y del Prat del Llobregat. Las pacientes han acudido a urgencias mayoritariamente los domingos, en la franja horaria de las 23 a las 7 horas. En el 4,7% nos encontramos con casos de reincidencia. El 90% son dadas de alta a su domicilio y hubo 1 caso de "exitus".

Conclusiones: La participación de nuestro centro en la elaboración y seguimiento de los circuitos integrados de asistencia a las mujeres víctimas de violencia doméstica que se crean en las comunidades de nuestra área de influencia, permite garantizar que la asistencia que recibirán estas mujeres tenga una continuidad. A la vez, al objetivar nuestros problemas a la hora de la derivación, ha facilitado el que determinados municipios con incidencia elevada de casos de violencia doméstica, se vean obligados a crear estos circuitos integrados si no los poseían y a la vez les hemos ayudado a demostrar su eficacia si ya estaban creados.

ESTUDIO CUALITATIVO: INMIGRANTES ILEGALES JUZGAN LOS SERVICIOS DE URGENCIAS ESPAÑOLES

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Objetivo: La Sanidad Española garantiza asistencia íntegra y de calidad a los inmigrantes ilegales en caso de urgencia. Sin embargo es evidente la escasa afluencia de "sin papeles" a los servicios de urgencias públicos. Deseamos saber las causas, desde el punto de vista de los principales afectados.

Metodología: Para ello realizamos un estudio cualitativo, mediante un foro de 8 inmigrantes ilegales; 2 de origen sudamericano, 2 asiático y 4 africano. Todos ellos afirman no conocerse y se seleccionan de forma aleatoria a través de varias ONGs.

Resultados: Las conclusiones a las que se llega es que realmente existe una incomprensible paradoja; a ellos únicamente se les ofrece asistencia en caso de urgencia, por lo que ciertas patologías no urgentes tras no ser tratadas desembocan en una urgencia. Asímismo no se confía en el secreto profesional sanitario, por lo que afirman que exclusivamente acuden en caso de emergencia. Destacan el "poco tacto" de los servicios de admisión en urgencias a la hora de pedir la documentación, y más de la mitad afirma conocer casos en los que ilegales, tras acudir a servicios de urgencias fueron detectados por el cuerpo de policía y poco tiempo después fueron puestos a disposición judicial.

Conclusión: Las justificadas ó no justificadas conclusiones a las que llegan los inmigrantes ilegales en España, hacen peligrar los derechos humanos y la salud pública. Es necesario corregir esta peligrosa situación que perjudica tanto a legales como a ilegales.

AGRESIÓN EN INMIGRANTES. UN PROBLEMA SOCIAL EN URGENCIAS

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Introducción: La inmigración está sufriendo una evolución social que repercute indudablemente, en el tipo de demanda de estos pacientes en nuestros Servicios de Urgencias Hospitalarios. En los últimos tiempos se ha observado un aumento de las agresiones en pacientes inmigrantes, tras ellas se esconde un profundo problema social.

Objetivos: Describir la agresión en pacientes inmigrantes, perfil clínico del paciente agredido, determinar factores de riesgo. Material y Métodos: Se ha realizado un estudio prospectivo durante el periodo comprendido Junio-2002 hasta Febrero-2003. Se ha realizado una encuesta personal, a todo paciente inmigrante agredido, la cual incluía datos administrativos, clínicos y sociales. Se obtuvieron un total de 276 casos. Posteriormente se realizó análisis con métodos estadísticos de variables continuas se utilizó medidas de tendencia central y de dispersión y para categóricas descripción de tablas de frecuencia.

Resultados: El 86,4% de los pacientes agredidos eran varones, el 13,6% mujeres. La edad media era de 27,4 ± 10,2 años. Respecto al país de procedencia el 70.1% eran de Marruecos, el 22,7% de países del este, el 6,4% Subsaharianos. Su estancia media en España es de 18,4 meses y su situación laboral es parado en el 61,43% (en el momento de la consulta). Si hablamos del tipo de agresión el 72,1% son cuerpo a cuerpo sin la presencia de objetos contundentes, el 18,6% por arma blanca, objeto cortante u objeto punzante y el 9,3% agresiones sexuales. La localización de las heridas un 37,6% en la cabeza, el 20,8% en el tronco y un 9,3% en extremidades, si comentamos el tipo de lesión 80,2% contusiones y hematomas, el 22,8% heridas inciso-contusas, el 8,3% heridas penetrantes y un 4,3% fracturas de diversa consideración. Respecto a la Prioridad de la atención un 61,4% fueron prioridad 3, prioridad 2 un 26,6%, prioridad 1 un 12%. El 36,7% presentaban signos de intoxicación alcohólica y un 32,1% reconocieron haber tomado algún tipo de droga. Respecto al motivo de la pelea el 39,4% fue por discusión bajo los efectos del alcohol o drogas, un 30,6% por robo, el 12,6% problemas de pareja, el 9,3% agresión sexual, un 6% mafias y un 2,1% relacionado con el trabajo. El 87,2% fueron derivados a su domicilio en el momento del alta. Cuando le preguntamos por el agresor/es un 96,2% eran también inmigrantes de su propia nacionalidad o bien de otra. La mayor tasa de incidencia la encontramos los viernes, sábados y vísperas de festivos con un 86,7% siendo la franja horaria más frecuentada entre las 01 horas hasta las 05 horas a.m.

Conclusiones: En general el paciente inmigrante agredido es un varón joven marroquí con una estancia en España de más de un año con precaria situación laboral. Afortunadamente en la mayoría de los casos las agresiones son de carácter leve, necesitando sólo un bajo porcentaje ingreso hospitalario. Reseñar como ciertos hábitos tóxicos como problemas sociales

de fondo (precariedad, inestabilidad laboral) favorecen en gran medida el aumento de incidencia de agresiones. Es llamativo el hecho de que las agresiones son producidas por otros inmigrantes siendo bajísima la tasa de agresiones por autóctonos de la zona lo que nos indica una buena convivencia y bajo nivel de conflictividad con esta población.

ASSESSMENT OF THE EFFICACY AND SAFETY OF GUT DECONTAMINATION IN PATIENTS WITH ACUTE THERAPEUTIC DRUG OVERDOSE

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Introduction: Gut decontamination forms part of the spectrum of treatments for acute therapeutic drug overdose (ATDO), with various options being available (syrup of ipecac, gastric lavage, activated charcoal, cathartic agents) whose use depends on the type of drug ingested, the time since ingestion and the clinical condition of the patient.

Objective: To assess the efficacy and safety of gut decontamination procedures used in our hospital for patients with ATDO. Methods: A 4-month prospective observational study was made of patients admitted to the Emergency Department with an ATDO. On arrival, epidemiological data (sex, age, drug type, dose, time from ingestion), clinical parameters (blood pressure, heartbeat, breathing rate, axillary temperature), and the physical exploration (especially the Glasgow Coma Score) were registered and the plasma levels of the drug ingested were determined. Gut decontamination was used or not, according to a decision-making algorithm used in our hospital to determine the most-appropriate method of decontamination. After 3 and 6 hours, the clinical condition of the patient was re-evaluated and new tests made. The patient was followed until hospital discharge, with the clinical evolution and the possible appearance of adverse events due to the decontamination being noted. The results were analysed using the SPSS 10.0 statistical program.

Results: Ninety-four patients were included: 60% were female, and the average age was 41 years. Digestive decontamination was indicated in 60 patients (63.8%), of which 3% were given syrup of ipecac, 8% underwent gastric lavage, 71% received only oral activated charcoal and 21% underwent gastric lavage followed by activated charcoal. Clinical deterioration was observed in 19%, usually reduced levels of consciousness. A toxicological analysis was carried out in 50 cases, with drug concentrations at 3 or 6 hours after admission having risen in 42% of cases. Adverse effects to the method of decontamination were recorded in 5% of patients. In 70 patients (74%), the algorithm was followed (group A), while in the other 24, treatment other than that indicated by the algorithm was given (group B). Clinical deterioration was observed in 14% of patients in group A and 33% in group B (p=0.041). An unfavourable evolution of the analytic curve occurred in 39% of patients in group A and in 66% in group B (p=0.105). Sever adverse effects due to decontamination occurred in 2% of patients in group A and 11% in group B (p=0.171). The evolution was favourable in all aspects (clinical+tests+absence of adverse events) in 51% of patients in group A and 13% in group B (p=0.011).

Conclusions: The efficacy and safety of gut decontamination in patients with ATDO are greater in patients where the decision-making algorithm used in our hospital is applied, although its application does not prevent clinical deterioration, increased absorption of the drug or the appearance of adverse events in all cases.

INTOXICACIÓN POR METANOL SIN ACIDOSIS METABÓLICA: A PROPÓSITO DE UN CASO

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Introducción: La intoxicación por metanol es infrecuente, aparece de forma epidémica (sustituto de etanol en licores) y aislada (alcoholicos crónicos y autolisis). Presenta una mortalidad elevada (mayor del 50%) con ingestas de pequeñas cantidades 15-30 ml. El metanol es un producto atóxico que necesita de alcohol-DH (formaldehido) y aldehido-DH (ac. Fórmico) dando lugar a metabolitos tóxicos, existiendo un periodo de latencia hasta el inicio de los síntomas (prolongándose en coingesta con etanol).

Caso clínico: Paciente de 36 años operario de laboratorio de conservera en tto con IRS por depresión. Refiere ingesta de 50 ml de metanol hace aproximadamente 60-90 min. Remitido a nuestro hospital por familia sin sintomatología alguna, con llanto fácil y quejido continuos. A la exploración física: fétor enólico, FC 60pm; eupnéico; TA: 120/63; Alerta y colaborador; ACP: normal; abdomen y extremidades normales y Exploración neurológica completa normal, sin focalidad. Pruebas complementarias: hemograma y bioquímica normales; GAP: pH: 7.38; PaO2: 89; PaCO2: 38; HCO3: 24; Omol: 340 (calculada 289). Se decide comenzar perfusión de etanol al 10% (por vía venosa central) y remitir el paciente a centro de referencia (100Km) para comenzar tto con hemodiálisis. A las 5 horas y, tras procesado de muestra, metalonemia de 1.8 g/L (mortal), persistiendo normalidad ácido-base.

Discusión: 1- El diagnóstico de Intoxicación se realiza por datos clinicos y de laboratorio (acidosis metabólica o acidosis de hiato doble) 2- Necesidad de tto agresivo aun en ausencia de sintomatología; Infusión de etanol y hemodiálisis (resto de medidas poco útiles) 3- La metalonemia en sangre no indica el tto sino que califica la gravedad de la intoxicación. 4- Sin tto precoz de etanol (menor de 120min) ¿hubiéramos observado acidosis? ¿Es éste el intervalo útil?

INTOXICACIONES AGUDAS POR PLAGUICIDAS: REPERCUSION EN LA UNIDAD DE URGENCIAS DE UN HOSPITAL COMARCAL

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Objetivos: Análisis epidemiológico, clínico, diagnóstico y terapéutico de las intoxicaciones agudas por plaguicidas atendidas en la Unidad de Urgencias del Hospital de Poniente de Almería. Pacientes y

Metodos: Estudio descriptivo transversal de los 288 pacientes con intoxicación aguda por plaguicidas atendidos en nuestra Unidad de Urgencias en el periodo 2001 a 2003, en base a los datos recogidos en la historia clínica y en el documento de declaración obligatoria individualizada de intoxicación por plaguicidas.

Resultados: De nuestro grupo de pacientes 255 eran

varones y tan solo 33 mujeres, con 65 años de edad media y predominio de nacidos en España (56,9%), seguidos de lejos por los de origen marroquí con un 7,6%. El 37,5% fueron trabajadores autónomos, el 63,2% ya había resultado intoxicado previamente en al menos una ocasión, y la inmensa mayoría de las intoxicaciones se produjeron en ambientes cerrados (96,5%), principalmente al fumigar (54,9%). En un 4,9% de los casos la intoxicación fue con fines autolíticos. Los principales tóxicos implicados fueron carbamatos (18,8%) y organofosforados (17%), tratándose de una intoxicación mixta en el 10,8% de los casos. El 17% de los pacientes desconocía absolutamente el producto o productos que había estado manipulando. Las vías principales de contacto con el tóxico fueron la cutánea (49,7%), la inhalatoria (31,3%), la digestiva (8,3%) y la ocular (8%). El 25,7% no usó protección alguna, el 35,1% únicamente mascarilla, el 13,9% guantes, el 3,5% protección ocular y tan sólo el 17,4% traje especial. Del cuadro clínico destacaron síntomas cardiorespiratorios en el 47,9% de los afectados (principalmente disnea, sibilancias, alteraciones de la tensión arterial, broncorrea y bradicardia), síntomas cutaneomucosos en el 30,6% (principalmente diaforesis, irritación de la conjuntiva ocular y prurito y/o eritema cutáneos), síntomas neurológicos en el 18,1% (principalmente mareo, cefalea, temblores, visión borrosa, miosis y alteraciones del nivel de conciencia), y síntomas digestivos en el 16,3% (principalmente nauseas, vómitos, dolor abdominal, sialorrea y diarrea). Los valores de la colinesterasa se alteraron únicamente en el 1,4% de los casos. Requirieron lavado corporal exhaustivo el 30,6% de los pacientes, lavado gástrico el 3,8%, administración de atropina el 16,3% y de oximas el 1,4%. El 1% de los intoxicados fallecieron, y el 3,1% presentó una evolución particularmente desfavorable. Tan sólo el 5,9% requirieron ingreso hospitalario.

Conclusiones: En nuestro ámbito geográfico existe una alta incidencia de intoxicaciones agudas por plaguicidas, siendo reincidentes casi dos tercios de los pacientes. Las causas fundamentales de la intoxicación son el uso de estos productos en ambientes cerrados y sin sistemas adecuados de protección corporal, no siendo desdeñable el porcentaje de pacientes que desconocen la naturaleza y riesgos de los productos que manipulan. La mayoría de los casos se resuelven favorablemente en urgencias, con bajas tasas de mortalidad y de ingresos hospitalarios.

DO CHILDREN KNOW ABOUT SYNTHESIZED DRUGS?

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Synthesized drugs are substances slightly different in their molecular structure, to those from which they derive, but with the same effects upon the Central Nervous System. Its continuous and ascending leading role is due among other factors to:

- The rise in the quantities seized.
- The circumstances that surround its intake (youth and teenagers).
- The generalization of its consumption associated to parties, weekends and celebrations in general.
- Its relation with spectacular and lethal car accidents in highways (Kamikazes).

Aims: 1.-Knowing the rate of information that scholars have about synthesized drugs:

- Age of initiation.
- Intake guidelines.
- Access to these.

2. -With the facts obtained, establish social sanitary educational strategies, with the result of preventing the intake and abuse of drugs among the infant population.

Methods and material: Distribution of surveys in different schools in both rural and urban areas of Zaragoza (Spain) to students with ages between 11 and 16.

Results: After analysing 1000 anonymous surveys we can appreciate the following facts:

- There are no great differences in relation with the sex of students.
- There are no great differences between the answers given by students of urban and rural areas, or of public and private schools.
- The fundamental differences are related with the age of the child, due to which prevention strategies should be based on this variable.

Conclusions: The extension of intake of synthesized drugs among teenagers, is a matter of concern in nearly every European country. Like in any risk prevention program, information for consumers of any possible toxic effects produced by synthesized drugs, makes us consider as a first aim, is the ideal moment in which such information will result more effective to prevent the initiation in its intake.

EVOLUTION OF ANTIDOTIC THERAPY FOR CENTRAL NERVOUS SYSTEM DEPRESSION

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Central Nervous System (CNS) depression is the commonest effect in poisoned patients on arriving in the emergency department. And it has been so since the mid 50´s when the widespread prescription of barbiturates originated the beginning of what it was later to be called the "acute poisoning epidemic". The evolution of the treatment of this clinical situation has been very interesting, showing a very strong relationship with the technical developments in the medical field. Starting with the search for antidotes when the mechanisms of action of the implicated substances were not well understood, this treatment moved towards a conservative attitude popularised as the "Scandinavian method" in the early 60´s and in close relationship with the implementation of the ICU´s.

This method proved to be very useful for life support of patients poisoned by CNS depressants, not only barbiturates, but also other agents of increasing frequency such as benzodiazepines and opiates, all of which are functional toxics. The epidemiological profile of acute poisoning has changed dramatically in the last 30 years, as benzodiazepines, alcohol and opiates have substituted barbiturates. Nevertheless the first places are occupied by CSN depressants which continue to produce a similar clinical picture, focusing clinical and therapeutic research on the toxic coma management. Thus, for the last 15 years for some agents and some clinical situations there have been signs of a reversal of the way previously described, from the conservative life support to the coma cocktail, including hipertonic dextrose, thiamine, naloxone and flumazenil. A systematic approach for the management of the patient with altered mental status includes assessment of the patient´s vital functions. Naloxone and flumazenil can be considered antidotes in the stronger sense of the meaning because they are capable of deplacing opiates and benzodiazepines

from their specific nervous receptors, reversing coma and obviating the need for intensive care measures such as intubation or mechanical ventilation. Some of the open questions about them are the specificity of their mechanism of action with the implication of the possibility of use for other toxic and no-toxic clinical situations and their safety, related to their side effects.

DIAGNOSTIC ACCURACY OF ULTRASOUND AND COMPUTED TOMOGRAPHY FOR EMERGENCY DEPARTMENT DIAGNOSIS OF APPENDICITIS: A SYSTEMATIC REVIEW

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Background: Appendicitis represents 5% of Emergency Department(ED) visits for abdominal pain, and can be difficult to diagnose clinically. Many adjunctive studies are used to confirm the diagnosis in the ED setting, including imaging studies such as ultrasound (US) and computed tomography (CT). However, the diagnostic accuracy of US and CT in the ED setting has not been systematically examined.

Objectives: To determine the diagnostic accuracy of US and CT in acute appendicitis presenting to the ED, and to describe outcomes associated with the use of these tools.

Methods: A systematic review of diagnostic studies was conducted, examining the sensitivity and specificity of US and CT for appendicitis. Secondary outcomes included cost and time spent in imaging. A comprehensive search strategy was employed and inclusion criteria were applied independently by two reviewers. Study quality was assessed using empirically validated measures. Data were extracted independently by two reviewers and contingency tables were recreated where possible.

Results: Thirteen studies were included and ten more are undergoing assessment. Of the included studies,12 were U.S. based and 1 was Australian. All were cohort studies. Nine were prospective and 4 were retrospective chart reviews. All studies used differential verification: surgery and clinical follow-up. Prevalence of appendicitis in cohorts ranged from 19-79%. Fixed effects pooled sensitivities for US and CT were 62%(95% CI 58,65) and 89%(86,92) respectively. US sensitivity was heterogenous (IQ 40,83%); specificities and CT sensitivity were not. LR Chi-square tests for heterogeneity are significant.

Conclusions: Prevalence of appendicitis varies widely between studies, implying varying referral patterns to diagnostic imaging. Quality of studies was variable. US is heterogenous for sensitivity; CT is homogenous and accurate for sensitivity and specificity. Further research is needed regarding variable apparent prevalence and US heterogeneity.

WHAT ARE THE EFFECTS OF THE EMERGENT ABDOMINAL US FOR ACUTE ONSET ABDOMINAL PAIN PERFORMED BY THE EMERGENCY MEDICINE PHYSICIAN

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Objective: The aim of this study is to determine the effects of abdominal US performed by the emergency residents on doctor's clinical judgment of patients presenting to emergency department (ED) with abdominal pain.

Methods: This prospective, observational study is performed between October 2001 and January 2002, on patients aged over 16 with acute onset abdominal pain. First, the patients medical history was taken and a physical examination was performed and the first clinical decision was given: discharge, hospitalization, observation in ED or consultation by a surgeon. According to the differential diagnosis abdominal US was performed and than whether the first clinical decision is same or additional consultation, lab tests, conventional US, computerized tomography or re-exam is a necessity. The differences on the two clinical judgments were statistically analyzed. Traumatic abdominal pain and patients which required resuscitation were excluded.

Results: 439 patients with abdominal pain were included in the study. The patients were between 16-88 years old (mean 39.8 ± 17 and median 38 ± 24), and 187 (42.6%) were male. US were found 54.7% percent normal. US changed the clinical decisions in 123 (28.0%) patients. Clinical decisions changed about 50% in the patients which were thought to be admitted before US ($p<0.01$); in the patients who were discharged, a very low change occurred (%7.4) ($p<0.001$). Most clinically significant changes in clinical decisions had additional laboratory tests and additional consultations ($p<0,001$). In this period hospitalization from ED with acute abdominal pain was 110 (25.1%), 42 (38.2%) of them were not operated on. Five patients, all of whom were male, died after admission (mortality rate was 1.1%).

Conclusion: The emergent abdominal US performed by the EP on patients with acute abdominal pain resulted in a change on the physicians' clinical judgment, and because of it the patients' management.

ADMINISTRATION OF OPIOID ANALGESIA PRIOR TO RIGHT UPPER QUADRANT ULTRASOUND DOES NOT AFFECT THE ASSESSMENT OF THE SONOGRAPHIC MURPHY'S SIGN

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Objectives: To assess effects of opioid analgesia (OA) on the ability of the sonographic Murphy's sign (SM) to detect gallbladder disease (GBD: cholecystitis or cholelithiasis).

Methods: A physician survey, consisting of a single query as to whether OA affected the SM, was performed. Emergency medicine (EM, n=39) and emergency radiology faculty (ERad, n=11) at two institutions were included. This was followed by a retrospective consecutive-sample study of 119 adult ED patients (in a Level I trauma center, ED census 70000) receiving RUQ US in 2002. Age, sex, final diagnosis and timing of OA administration were documented. Logistic regression analysis with odds ratio (OR) and 95% confidence intervals (CI) was used to compare patients who received OA (Opioid) prior to US with those who did not (No Opioid). Using ultimate ED or hospital diagnosis as gold standard, the SM's sensitivity (SENS), specificity (SPEC), and positive and negative predictive values were calculated.

Results: 100% of ERad, but only 10% of EM, physicians indicated OA administered before US interfered with SM assessment ($p<.001$). The chart review included 119 patients (73 female, mean age 49). OA was administered prior to US

in 25 patients (21%). GBD was diagnosed in 43 patients (36%). SM was positive in 30 patients (25%). Between the Opioid and No Opioid groups, there were no significant differences in SENS (48.2%; CI 28.7-68.1% vs. 68.8%; CI 41.3-89%) or SPEC (92.5%; CI 83.4-97.5% vs. 88.9%; CI 51.8-99.7%) of SM in determining GBD. Adjusting for patient age, sex and whether the US was performed after hours, no association was found between the Opioid group and false positive SM (OR 0.74, CI 0.08-6.65), or false negative SM (OR 1.42, CI 0.46-4.43).

Conclusions: There is a profound difference in the opinions of EPs and ED radiologists regarding the effects of OA on the US assessment of GBD. However, this study found no difference in US test characteristics associated with pre-US administration of OA.

ULTRASONOGRAPHY AS AN ALTERNATIVE WAY FOR DIAGNOSING PLEURAL EFFUSION NATURE ESPECIALLY IN EMERGENT SITUATIONS

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Background: Many disease etiologies can cause pleural effusions, including cardiac diseases, nephrotic syndromes, malignancies, trauma and others. It is important for a physician to know the nature of a pleural effusion. Is it a transudate or an exudate? The answer determines the differential diagnosis and treatment. For years there has been no way to answer this question, except aspiration of the pleural fluid. This invasive method is unacceptable for many patients, especially emergent patients. In addition this invasive method can lead to some important complications such as pneumothorax or infection. In emergent situations we must know the pleural effusion nature as soon as possible because we want to start the treatment based on the pleural effusion nature. In this study we introduce a new method. Ultrasonography can offer an easier, less expensive and more acceptable method in this regard.

Methods: We selected 80 patients (45 men and 35 women) who had their pleural fluid aspirated and examined by the lab. After aspiration, sonography was performed independently by two expert radiologists. The radiologists were blinded to the clinical information concerning the patient. We compare the radiology results to the lab results. Radiologists used the following three criteria in determining the pleural effusion nature: 1) pleural effusion with septation 2) pleural effusion with echogenicity and 3) pleural thickening more than 3 mm.

Results: In this study we found pleural effusions with septation or internal echogenicity were always exudates. Sonographic evidence of thickened pleura (more than 3mm) is highly suggestive of an exudate. Although an anechoic effusion is probably greater evidence of a transudate, it was noted in 14% of the patients with exudates. On the basis of the lab results we identified 29 transudates and 51 exudates, while ultrasound results indicated 34 transudates and 46 exudates. Ultrasound had 93% sensitivity and 86% specificity to diagnose a transudate and had 86% sensitivity and 93% specificity to diagnose an exudate.

Conclusion: We conclude that sonography is useful in determining the nature of pleural effusions especially in emergent situations that we want to institute treatment early. Sonography also has the ability to show other finding associated with effusions such as metastasis to pleura, pleural nodules and some intra paranchymal lung lesions and in this regard it can help us to establish a diagnosis and start treatment in emergent situations.

ULTRASOUND RESEARCH DESIGN AT THE UNITED STATES SAEM NATIONAL CONFERENCE (1999-2003)

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Objectives: Improved technology, portability, and an eager EM populace have embraced bedside ultrasound (US). Emergency medicine US research has subjectively increased in recent years but has not been previously quantified. This study reports the quantity of research and quality of design of US abstracts accepted at the Society of Academic Emergency Medicine (SAEM) national conference.

Methods: Accepted abstracts with an US focus from SAEM (1999-2003) were retrospectively analyzed for research design type. Content analysis focused on three components: 1. Randomization of sample 2. Manipulation of independent variable 3. Control of confounding variables. If a study had all 3 components, it was considered Experimental (E). If it lacked randomization yet was prospective, it was considered Quasi Experimental (QE). If a study was retrospective, it was considered Non Experimental (NE). Data was reported using descriptive statistics and confidence intervals (CI) as SAEM abstracts submitted (SAS), SAEM abstracts accepted (SAA), US abstracts accepted (UAA), percentage US abstracts (%), and design type.

Results:

Year	SAS	SAA	UAA	%	E	QE	NE
2003	939	451	20	4.4	4	16	4
2002	891	497	18	3.6	3	10	5
2001	982	475	27	5.7	3	17	7
2000	990	502	18	3.59	5	4	9
1999	1086	537	15	2.79	2	8	5
Mean	977.6	492.4	19.6	4.02	3.4	10.2	6.0
CI			17.6-21.6		2.1-4.7	7.21-13.2	4.4-7.6

Conclusions: Four percent of SAEM accepted abstracts pertained to US over the last five years. The percentage of US abstracts accepted to the SAEM in 2003 bettered the mean while 20% of these abstracts were experimental in design. Study design from accepted US abstracts continues to lack randomization as most studies were a quasi or non-experimental design.

CONTRAST-ENHANCED SONOGRAPHY VERSUS CONTRAST-ENHANCED HELICAL CT IN BLUNT ABDOMINAL TRAUMA: INITIAL EXPERIENCE.

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Background: The role of ultrasound (US) in the evaluation of blunt abdominal trauma is subject to controversy. A new US technique has been developed using a second-generation contrast medium. We report our preliminary experience in the evaluation of trauma patients using this technique in comparison to contrast-enhanced computed tomography (CT).

Material and methods: From April to July 2003, 16 patients (10 males and 6 females) were evaluated. All patients underwent both unenhanced US (UUS) and contrast-enhanced US (CEUS) followed by a contrast-enhanced CT. Both US examinations were performed by an emergency physician or radiologist using an ATL 5000 HDI SonoCT device (Philips,

Bothell, USA): CEUS study was carried out after i.v. injection of 5 ml of a second-generation US contrast medium (SonoVue®;Bracco, Italy). The CT examinations were performed by a radiologist with a spiral CT single scan EMOTION (Siemens, Berlin, Germany) after i.v. injection of 120 cc of nonionic contrast medium (Iomeron 300; Bracco SpA, Italy).

Results: UUS detected 4 small amounts of free abdominal fluid, 2 small subcapsular renal fluid collections and 3 parenchymal injuries. In seven patients no US abnormalities were detected. In 8 out of 16 patients CEUS disclosed no abnormalities; 9 injuries were diagnosed in the 8 remaining patients. CT revealed no abnormalities in 9 out of 16 patients while in the 7 remaining patients 8 injuries were detected. As far as direct sonographic signs of organ injury are concerned, considering CT as the gold-standard, we calculated a sensitivity, specificity and accuracy of UUS of 42.8%, 88.8% and 68.7%, respectively. If both direct and indirect signs are considered, sensitivity, specificity and accuracy of UUS was 71.4%, 66.6% and 68.7%, respectively. An increase in the diagnostic performance was achieved using CEUS giving a sensitivity, specificity and accuracy of 85.7%, 88.8% and 87.5%, respectively.

Conclusions: These data seem to suggest CEUS as a new feasible technique in the hands of emergency physician, and to be a useful tool better correlating with CT than unenhanced US.

A DESCRIPTION OF EMERGENCY DEPARTMENT RELATED MALPRACTICE CLAIMS IN THE NETHERLANDS: CLOSED CLAIMS STUDY 1993 – 2001

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The aim of this study was to assess the quality of care provided at emergency departments (EDs) in The Netherlands by analysing medical liability insurance claims.

Methods: Retrospective study performed by reviewing records at MediRisk, presently the largest insurer for medical liability in The Netherlands. The following data were abstracted from the files available for analysis: medical discipline involved, physician involved (resident or consultant), nature and gravity of the complaint, and final claim disposition.

Results: Between 1993 and 2001 a total number of 326 claims involving the ED were filed at MediRisk. Of these, 256 claims (79%) were closed and available for analysis. The majority of claims involved minor surgical conditions: fractures, luxations (joint dislocations), wounds and tendon injuries (210/256, 82%). Medical liability claims were filed primarily for alleged errors in diagnosis and treatment. Residents were involved in 76% of the claims; resident supervision by a consultant was documented in only 15% of the medical records. Permanent patient disability resulting from improper ED treatment was alleged in 22% of the claims. Four percent of the claims involved the death of a patient. Physicians accepted liability in 16% of the claims filed. Indemnity payments during the 8-year study period totalled = 80504.000.

Conclusion: The number of medical liability claims is low compared to the number of patients treated in EDs in The Netherlands. Claims primarily concerned alleged mistakes in diagnosis and treatment of minor trauma. Residents were involved in the majority of the claims. More resident supervision is needed, as are specific training programs for emergency physicians.

ANALYSIS OF PATIENT WHO REFUSE CARE AND LEAVE FROM UNIVERSITY HOSPITAL EMERGENCY DEPARTMENT A REPORT OF DOKUZ EYLUL UNIVERSITY, DEPARTMENT OF EMERGENCY MEDICINE

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Objective: To determine the characteristics of patients who refused care and left from the University Hospital Emergency Department (ED).

Methods: This study was performed in the Academic Emergency Department with an annual attendance of approximately 40,000 patients in Izmir Turkey. The ED computer data-base coded for refused care and left (RCAL) patients between July 1, 2000 and December 1, 2001, was determined and reviewed retrospectively.

Results: ED computer data revealed 16,707 patients regisreted to be seen and 573 (3.42%) patients RCAL from ED in a six month period. Data were collected from 485 of 573 (84.64%) patients, but 88 patients excluded because of unobtainable or insufficient data of ED chart. Two hundred seventy-eight of the patients (57.31%) were female. Mean RCAL number of patients in weekend night shift, week days night shift, weekend day shift, and week days day shift were found 1,76, 1,58, 1,21, 0,85, respectively. Four hundred fifty-three (93.4%) of 485 patients of RCAL were seen and examined by a physician, 32 (6.6%) patients were not. The number and percentage of RCAL patients divided to the care areas of our ED were as follows: 283 (58.4%) patients from quick care area, 110 (22.7%) patients from monitered observation unit, 48 (9.9%) patients from resuscitation room, 44 (9.1%) patients from minor trauma room RCAL (p:0.000).

Conclusion: 3.42% of ED patients RCAL and this result concordant the literature. Our results indicated higher RCAL rates for following characteristics: Women, weekends, night shifts, patients who seen in the quick care area with minor complaints.

FOLLOW-UP AND PRESCRÝPTÝON COMPLÝANCE AFTER EMERGENCY DEPARTMENT EVALUATÝON

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We aimed to determine which factors are associated with patient compliance in clinical follow-up and the discordance rate to prescriptions written by emergency physicians. This prospective study was held at a tertiary university hospital emergency department (ED) between 1 and 28 february 2002. 343 patients were included into the study. Data were collected by means of a questionnarie form. Study form included demographic characteristics, if a prescription was given or not and if outpatient clinic control was recommended or not. Patients who were hospitalized, referred to another hospital or leaved the ED against the medical advice were excluded from the study. Patients were followed up one week after discharging from ED by telephone callbacks to determine the patients

concordance rate to their controls and prescriptions. 261/343 patients (76.1%) were referred to outpatient clinic controls. The rate for not going to controls was 57.5% (150/261) and the most frequent reason was neglection with a rate of 53.3% (80/150) ($p<0.05$). Our results showed that compliance rate to follow-ups did correlate with with age ($p<0.05$), appropiate health insurance ($p<0.05$) and consultation rate in ED ($p<0.05$) but not with gender, location of their home, education level of patients, seriousness of the disease and prodiagnosis during discharge. 217/343 patients (63.3%) were prescribed in ED. The discordance rate to their prescriptions was 13.4% (29/217) and the most prominent reason was neglection with a rate of 55%. (16/29) ($p=0.000$). There was not a relation between follow-up compliance rates and prescription concordance rates ($p<0.05$). To increase outpatient clinic control rates, physicians should clarify the importance of follow-ups to the patients and arrange their appointments by means of determining the date and hour of the rendezvous before discharging from ED.

PATIENT SATISFACTION OF DISCHARGED AND ADMITTED PATIENTS FROM THE EMERGENCY DEPARTMENT: A COMPARATIVE STUDY

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Patient satisfaction is an indicator of the quality of care provided by emergency department (ED) personnel. It is also linked to other outcomes including malpractice litigation, willingness to return and medical compliance.

Objectives: We attempt to test a model to understand and estimate the degree of satisfaction with various aspects of the ED service among adult and pediatric patients discharged to home, and compare with those who were admitted to inpatient services.

Methods: Setting: Urban non-profit tertiary care hospital. Computer-Assisted Telephone Interviews in the spoken language (English, Spanish or Russian) were conducted 2 weeks after patients were discharge from the ED. The sample was randomly selected from the ED database of discharged patients from Oct. to Dec. 2002. Those who lacked a valid telephone number and didn't speak any of the above languages, as well as hospital staff and their relatives were excluded. The results were compared with the results from a survey of discharged hospital inpatients who were admitted through the ED during the same months in 2001.

Results: A total of 253/891 (28.4%) adult ED patients and 150/352 (42.6%) caregivers of patients under 18 years of age, discharged from ED completed the survey. Adults discharged to home from ED and those admitted to inpatients from the ED gave similar overall satisfaction ratings (62% vs. 66% p= 0.4). The caregivers of children admitted to inpatient from the ED gave the highest overall satisfaction rating. Patients who spent less than 1 hour waiting, less time than expected and those who came to the ED during the evening and night shifts were consistently more content with the service. Most patients also showed greater satisfaction when there was proper communication and respect from the ED professionals.

Conclusion: Our model for comparing patient satisfaction in adult and pediatric ED between admitted and discharged patients was the first of its kind in the nation. Acknowledgement: Whitton Associate, Inc & Markowitz Hartstone Associates, Inc. For construction and administration of the survey and analysis of the results

PATIENTS SATISFACTION AND WILLINGNESS TO RETURN WITH EMERGENCY CARE

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Patient satisfaction is an indicator of the quality of care provided by Emergency Department personnel.

Objective: to identify process of care measures that are significantly associated with satisfaction and willingness with return.

Methods: Patient satisfaction and willingness to return at Hazrat-e-Rasoul ED (the only emergency residency training program in Iran) were assessed. Baseline questionnaire, 7day follow up telephone interviews were performed. Overall satisfaction and willingness to return were modeled with stepwise logistic regression.

Results: During 10 day study period 1000 on site questionnaires (83 % of eligible) were completed. Telephone interviews were completed by 600patients (60% of patients who completed the questionnaires) 58.8% rated their ED care as Excellent, Very Good or Good . Variables significantly correlated with high (Excellent, Very Good or Good) satisfaction include haring the emergency physicians and nurses who clearly answer patient's questions, having a relationship of trust with ED staff. Variables significantly correlated with low satisfaction include not having the perception of the time spent in the ED as too long, poor control of pain in ED not knowing why tests were done, their questions not being properly answered. Patient characteristics that significantly predicted higher satisfaction include old age. Patient categorized as emergent status in triage have been more satisfied than urgent and non urgent. Willingness to return is strongly predicted by patient satisfaction.

Conclusion: To improve quality of care for patients in the ED, physicians should be more attentive to patients' concerns and questions, reduce the patients' perception of a long waiting time, recognize and properly treat their pain.

PATIENTS LEAVING EMERGENCY DEPARTMENT AGAINST MEDICAL ADVICE (AMA), RASOOL AKRAM HOSPITAL, TEHRAN-IRAN

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Introduction: One of every 65 patients visiting EDs, leave against medical advice. They increase the rate of malpractice though there may not be any legal or ethical problem. Leaving AMA is either patient related, medical service providers or hospital environment related. Being informed of the causes of leaving AMA in every ED helps to improve medical services, specifically at Rasool Akram hospital ED, which is the first experience of a modern ED in Iran.

Methods & Materials: This is a retrospective cross-sectional study. 110 patients were selected by a clustering sampling. Demographic information collected from medical units. The cause of leaving AMA was asked from patients in a telephone interview. Spss 11.0, chi^2 & t-test were used for data analysis.

Results: Mean age was 27.9 (24.3-31.5) years. 61.8% were male. The most prevalent chief complaint was orthopedic complaints (44.1%), followed by multiple trauma (15.3%) and abdominal pain (10.8%). 45.4% of patients mentioned "feeling better" & "finding no necessity for anything more" as the cause of leaving AMA. Personal business (23.5%) and delay in providing medical services (16.8%) were the next most commonly cited reason. There was a significant difference in causes of leaving AMA according to the service in charge (0.0001) and chief complaint (0.001).

Discussion: Young men were the most common patients leaving AMA. "Feeling better" and personal business were cites as the leading causes of leaving AMA, as with other studies. Special principles in orthopedics, surgery & gynecology services in Rasool Akram Hospital, could be considered as the underling cause of leaving AMA. Key words: leaving against medical advice - emergency department - medical services.

INCIDENCE AND MANAGEMENT OF PATIENTS WITH ABNORMAL INR IN THE EMERGENCY DEPARTMENT

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Oral anticoagulants are commonly used in ambulatory outpatients. The main indications for using oral anticoagulants are to protect the patient against thromboembolic events after episodes of deep vein thrombosis, pulmonary emboli, or in patients with atrial fibrillation or an artificial heart valve. The main anticoagulant used in Israel in outpatients is Warfarin. The activity level of the drug is measured by INR – international normalized ratio which ideally should be between 2 and 3, and between 2.5 and 3.5 in patients with artificial heart valves. The drug has narrow theraputic range and its blood level can be influenced by many other concomitant medications, food and diseases. The main complication encountered is bleeding. Between 10 and 20% of patients on Warfarin bleed, half of them despite normal therapeutic levels of the drug (INR less than 3.5). Many patients are referred to the emergency department due to bleeding or significantly abnormal INR.

Objective: To examine the relationship of INR and bleeding, and the management of patients referred to the emergency department with INR above the theraputic range.

Methods: All files of patients referred to the emergency department during the latter half of 2001 with an INR above 3 were processed. Altogether 142 patients were included in the study. They were divided into four groups according to their INR; group1 included 79 patients, with an INR between 3-4, Group 2 – 25 patients with an INR between 4-5, Group 3 – 27 patients with INR between 5-10 and group 4 – 11 patients with INR > 10. The average age of the patients in the study was 69 years. There were 63 (44.4%) males and 79 (55.6%) females. 91 (64%) of cases had atrial fibrillation, 62 (44%) had hypertension, 54 (38%) had RHD and 49 (35%) had CHF. The main complaints on admission were: GI bleeding – 8 (group 1,3,4), CVA – 2 (group 1), epistaxis – 6 (group 1,3), hematuria – 2 (group 2,3) and gingival bleeding – 3 (group 1,2). 28/142 (20%) were treated in the ED with IV vitamin K, FFP and blood. Most of them were from group 3 and 4. 72/142 were hospitalized 52/72 due to underlying diseases, 9/72 for INR correction and 11/72 due to bleeding complications. Only 1 patient (group 1) returned during the following week to the ED and was hospitalized due to significantly increased INR.

Conclusions: 21/142 (14.8%) of patients developed bleeding events. There isn't a clear relationship between INR level and the bleeding rate. We found that it is safe to treat patients with abnormal INR and without significant bleeding in the emergency department and discharge them home with clear recommendations for family physician follow up.

THE INTEREST OF FINGERPRICK KETONE TESTS IN HYPERGLYCEMIC PATIENTS IN THE EMERGENCY DEPARTMENT SETTING

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Objective: We have compared the semiquantitative measurement of acetoacetate using urinary dipsticks with the bedside quantitative fingerprick measurement of the principal ketone bodies 3-beta-hydroxybutyrate (ß-OHB), for the diagnosis of ketoacidosis.

Methods: This is a one year retrospective study of patients who presented with hyperglycemia equal or > 250 mg/l in the emergency department setting. We have compared sensitivity, specificity, predictive value (PV) of ketonuria and ketonemia for the diagnosis of ketoacidosis (blood bicarbonates < 20 mmol/l, anion gap > 16 meq/l) in a sample of patients for whom levels of ketone bodies in blood and urine as well as serum electrolytes were available.

Results: We included 355 hyperglycemic patients. The median time between arrival and dipstick testing was 21 min and greater than two hours in more than 10% of cases. Comparison between ketonuria and ketonemia was performed in 173 patients. Ketonuria equal to or less than 1 cross or a ß-OHB value lower than 3 mmol/l enabled ketoacidosis to be excluded (negative PV 100%). At 2-cross cutoff point for ketonuria and at 3 mmol/l cutoff point for ketonemia, the two tests had the same sensitivity (100%), but the specificity of ß-OHB (93.9%) was significantly higher ($p < 0.0001$) than that of ketonuria (77.3%). The best positive PV for ketonemia was obtained at the 5 mmol/l cutoff point (100%) and for ketonuria at the 3-cross cutoff point (25.7%).

Conclusion: The measurement of ß-OHB in capillary blood is faster and more effective than the use of dipsticks in the urine to detect ketoacidosis in the emergency department setting.

THE NORTH AMERICAN AND THE EUROPEAN RESUSCITATION GUIDELINES FOR ADULTS. AN ANALYSIS OF THE DIFFERENCES AND THE CONTROVERSIES

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Introduction: Resuscitation Guidelines have been an integral part of medical decision making for decades and are still much needed. They have appeared mainly in textbooks, as indications and contraindications, treatments of choice, recommended practices, rules of thumb, etc. For the first time,

the Guidelines 2000 for Cardiopulmonary Resuscitation (CPR) and Emergency Cardiovascular Care (ECC) represent the conclusions from a large number of international resuscitation experts. The Advanced Cardiac Life Support (ACLS) and Advanced Life Support (ALS) Courses are based on these guidelines. Despite of the longstanding acceptance to these guidelines, the recent version has generated debate and controversy among Emergency Physicians.

Methods: The purpose of this study was to review the North American and European Guidelines publications, analyze the weaknesses and the controversies. Publications that were considered include: the Guidelines 2000 for CPR and ECC, Handbook of Emergency Cardiovascular Care for Health Care Providers 2002, ACLS Provider Manual 2001 and the ALS Provider Manual 2002.

Results: Differences exist and controversies persist. Several of the new recommendations are not supported by adequate evidence. There is conflicting advice among the guidelines publications, which may lead to confusion. Several algorithms could be improved.

Conclusions: Guidelines have the potential to shape clinical practice, which can last for decades. Research on the effectiveness of the new recommendations is needed and it should include cost implications. The guidelines could be updated and disseminated more frequently. Consultation with international professional organizations would assist the guideline makers to ensure that the information provided is simple, clear, consistent and most of all, applicable worldwide.

THE "DECISION TREE" TO ANALYZE THE OPTIMAL CARDIAC MARKER

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Cost benefit analysis between two alternatives in clinical diagnosis . The main tool used to decide which is the optimal option is the "decision tree". We focused on two biochemical markers : CK-MB Mass and cTn T or I used for diagnosis of Acute Coronary Syndrome . The clinical and laboratory estimation of patients suspected suffering an acute coronary syndrome remain one of the main challenge for the clinician in the E.R. The technological analysis included two parameters: economical (cost benefit analysis); medical (safety, efficacy, effectiveness and availiability). Our purpose was to analyze the technology from a national point of view considering global costs and global benefits. Through the "decision tree" we calculated the false positive and false negative rate, true positive and true negative rate considering the prevalence of acute myocardial infarction and unstable angina. Specificity and sensitivity of each marker was considered to calculate the figures .For cost-benefit analysis we used the Net benefit formula: Net benefit = Ri – Ci =R(cTnT) –R(ckmb - mass) = C(cTnT) –C(ckmb - mass) = ΔR - ΔC = ΔR – (Δg + ΔFP).

ΔR = benefit ; Δg + ΔFP = cost ; g -=test cost ; FP =false positive

Conclusions: Because of low sensitivity rate no one of the cardic markers is useful in unstable angina. Troponin is the optimal cardic marker today for diagnosis of acute myocardial infarction.

SERUM IONIZED MAGNESIUM LEVELS AND IONIZED CALCIUM TO MAGNESIUM RATIOS IN ADULT PATIENTS WITH SICKLE CELL ANEMIA

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Objective: Homeostasis of erythrocyte volume in sickle cell anemia (SCA) is controlled in part by a dynamic equilibrium between ionic calcium (Ca2+) and magnesium (Mg2+). Low levels of total Mg2+ in SCA erythrocytes have been linked to increased sickling due to cell dehydration. We tested the null hypothesis that adult SCA patients have the same serum ionized magnesium (Mg2+) level and Ca2+/Mg2+ ratio as healthy African Americans (AA) and healthy Caucasians (CAUC).

Study Design: We measured serum Mg2+and Ca+2 with ion selective electrodes and calculated the serum Ca2+/Mg2+ ratios in patients with SCA and control groups (AA and CAUC).

Results: 74 SCA patients (49 in painful crisis and 25 in steady state) and 61 controls (29 CAUC and 32 AA) were compared. SCA patients had significantly ($p<0.001$) lower levels of serum Mg2+ (0.52 ± 0.047) compared to healthy AA (0.57 ± 0.04) and CAUC (0.62 ± 0.03). 86% of the adult SCA patients had serum Mg2+ levels below the mean for AA group and 96% of SCA patients were above the AA group's mean serum Ca2+/Mg2+. A significant proportion 25.6% (CI, 95% 16.2% to 37.2%) of SCA patients had serum Mg+2 levels below the racially-adjusted lower limit of normal. 50% (CI 95%, 38.1% to 61.9%) of SCA patients were above the upper limit of serum Ca2+/Mg2+ for AA controls.

Conclusion: By measuring serum Mg2+ and Ca2+ we were able to define a subset of SCA patients with hypomagnesemia and elevated Ca2+/Mg2+ ratios, who may benefit from magnesium supplementation. Use of ion-selective Mg2+ and Ca2+ electrodes proved to be useful in diagnosing this subset of SCA patients.

FIRST LEVEL ECHOCOLORDOPPLER EVALUATION OF PATIENTS WITH SUSPECTED DEEP VEIN THROMBOSIS (DVT) BY THE EMERGENCY PHYSICIAN: THE EXPERIENCE OF A GENERAL HOSPITAL IN THE FLORENCE AREA

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The investigation of patients with suspected DVT is a frequent problem in the ED. A formal echo Color Doppler (ECD) examination is not always available during night-time and weekend. The aim of this study was to analyze the safety and efficacy of a first level ECD evaluation by Emergency Physicians (EP).

Methods. Between January 2001 and December 2002, 194 venous ECD were performed by a EP at the ED of Careggi Hospital in Florence for suspected DVT of lower limb with or without clinical signs of pulmonary embolism. All the exams

were performed by two physicians certified by the Italian society of vascular ultrasound when they were on duty. The exams were performed during the night time or in the week-end, when the angiologist was not available. Time for the exam was not longer than 10 minutes. All the positive exams were subsequently controlled with a formal ECD by an angiologist within 24 hours. A clinical follow-up was obtained after one month for all patients with a first level negative ECD.

Results. 52 exams were positive for DVT: 10 showed a distal DVT and 28 a proximal DVT; in 14 patients a superficial thrombophlebitis was found. 142 exams were negative and all the patients were directly discharged from the ED. All cases of DVT detected by the EP were confirmed. In the 142 patients with a negative exam, 2 cases of distal DVT were detected at one month. The first level ECD examination in our ED showed a sensitivity of 96.3%, a specificity of 100% and a NPV of 98.6%.

Conclusions: On the basis of this results we can conclude that, in our experience, the first level ECD examination is fast and safe, and may be very useful for a prompt evaluation of suspected DVT and rapid discharge avoiding unnecessary admissions.

THE CURRENT STATUS OF AND FACTORS AFFECTING LEVEL OF KNOWLEDGE REGARDING BASIC LIFE SUPPORT (BLS) MEASURED IN RESIDENTS IN DOKUZ EYLUL UNIVERSITY HOSPITAL (DEUH)

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Background: We aimed to evaluate the current status of and factors affecting level of knowledge regarding basic life support measured in residents in DEUH.

Methods: Between December 2002 and February 2003, 300 residents working in DEUH were included to the study. A questionnaire comprising the demographic data and factors that may affect the level of BLS knowledge was completed by the subjects. Each question was graded as one point. Residents' success levels were measured by acceptable level of performance (ALP) technique. Data collected from each questionnaire were entered in Statistical Package for Social Sciences (SPSS) for Windows, Version 11.0 program and analyzed with Pearson Chi-square and one-way ANOVA tests.

Results: Totally 300 residents who were working in 33 different departments in DEUH were graduated from 18 different universities in which five have department of emergency medicine. 176 of the 300 residents were men and mean age was 27,4 +/- 0,3. Mean correct answers were 8,77 +/- 0,20 through male residents, 9,30 +/- 0,23 through female residents and 8,99 +/- 0,15 over all. Subjects who answered nine or more questions correctly were regarded as successful according to the mean calculated ALP score, which was 8,76. Only 54,7 % (n=164) of the residents were found successful.

Conclusions: BLS success rates of the residents in DEUH showed, although BLS training carried out in medical schools in Turkey might be regarded as sufficient, BLS level of knowledge of the physicians was found insufficient due to the lack of post-graduate or in-service training. Pre- and post-graduate BLS training need to be repeated more frequently to the residents.
Keywords: basic life support, cardiopulmonary cerebral resuscitation, and resident training.

E-LEARNING AND MULTIMEDIA METHODOLOGY APPLIED TO EMERGENCY MEDICINE TEACHING: A PILOT PROJECT

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During Academic Year 2002-2003 the course of Emergency Medicine was proposed to the last year medical students in a system that was integrating the typical academic lectures with new educational technologies. The aim was to move from a linear approach to learning towards a build up method, where the roles of teacher and students acquire new features and potentiality (e-learning). There were 42 students of the course. The students had the access to a web based e-learning platform (ELP) (http://bikini.mfn.unipmn.it) developed in collaboration with the Department of Informatics of the University of Eastern Piedmont.

The didactic tools used have been: 1) students recruitment on the ELP with the assignment of a personal account; 2) interactive academic lectures and skill stations on manikins; the slides of the lectures and other didactic material were available in advance on the ELP and could be downloaded by the students; 3) multiple choice questions for each lesson with a feed back on the ELP; 4) An electronic forum and show-case for students and teachers; 5) synchronous exercises using the platform Centra One Symposium© for specific training purposes (ECG reading, Chest x ray and CT scan reading etc.) This system allowed a wide interactions and direct involvement of students under a constant control of the teacher. The platform Centra One Symposium© permits recording of all the sessions, with the possibility of a critical review and feedback. 6) multiple choice questions exam on the web, with an immediate feed back and evaluation.

The ELP allowed to keep track of the students activity and learning progress. At the end of the course the students were asked to fill a feedback form on its didactic value. The results are described in another submitted abstract.

MEDICAL UNIVERSITY BLS CURRICULUM: THE FAILED ATTEMPTS?

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Objective: Not all the failures in BLS training may be attributed to poor skill retention. The aim of the study was to evaluate the BLS–related issues in the already trained medical students.

Material and methods: A group of 159 students of the IVth year of Medical Faculty participated in a short BLS course run by the ERC instructor. The group enrolled 59.7% females and 40.3% males aged 21-29 years (mean age 23.1 ± 1.1 years). Before approaching the ResusciAnne they were asked to answer a few questions included in the questionnaire designed by the authors (participation in BLS training, BLS certification and re-certification, past CPR experience, readiness to perform CPR, ability to evaluate the victim's level of consciousness, breathing, circulation and the need for C-spine control. Data underwent statistical analysis.

Results: The students participated in 1-5 CPR courses, majority of them – in just one. Three students got certification, none of them got re-certification; 12/159 already delivered CPR, 103/159 were ready to deliver CPR in the future. Self- confidence with regard to ABC skills fell into 2 categories: students were rather confident about their skills regarding evaluation of breathing and circulation (103 [64.8%] and 102 [64.2%], respectively) and pretty unconfident with regard to evaluation of responsiveness and the need for C-spine control (only 62 [39.2%] and 4 [2.5%], respectively). The remaining students were unsure about level of consciousness, breathing, circulation and the need for C-spine control in a victim. The differences between the self- confident and unconfident students were significant ($p<0.001$ for breathing, circulation and C-spine control; and $p<0.01$ for level of consciousness).

Conclusions: The existing Basic Life Support Guidelines 2000 provide students with a good CPR theoretical foundation. However, we need to be more diligent turning theory into practice through more extensive hands-on CPR training if we want to improve students' ability to practice what they've learned and improve their life saving skills.

QUANTITATIVE EVALUATION OF DIDACTIC EFFECTIVENESS OF E-LEARNING APPLIED TO AN EMERGENCY MEDICINE COURSE FOR MEDICAL STUDENTS

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The Medical School of the University of Eastern Piedmont proposed, for the Academic Year 2002-2003, the organization of the Course on Emergency Medicine using a new didactic methodology: the e-learning. The course was addressed to the 42 medical students attending the last year before graduation. The format of the course is proposed and discussed in another submitted abstract.

To evaluate the efficacy of the course, we submitted a preliminary multiple choice question (MCQ) test to the students, before the beginning of the course to the last year medical students. The test was the same that was proposed to the candidates to enter the residency of Anaesthesia and Intensive Care for the Academic Year 2002-2003. These candidates were considered the control group for the statistical evaluation, considering that these subjects attended the Emergency Medicine course, during their Medical School just the year before, but with a classical didactic approach. The same test was the submitted again to the medical students at the end of the course in Emergency Medicine, before the final official exam. The students were lastly subjected to the final exam, another MCQ test, submitted on the computer. The final score could be enhanced with an oral exam.

Results:

	Pre-Test	Post-Test	Final Exam	P (t-test)
	N. 60	N. 60	Vote/30	Pre-test vs Post-test
Medical Students	27 +/- 3,8	40 +/- 6,1	25,5/30	P<0,001
Residency Candidates		31,9 +/- 6,9		
Post test vs Residency Cand.		P< 0,001		

Only 3 students (7.1 %) did not pass the test and had to repeat the exam.

Conclusions: We considered statistically reliable the comparison between the post course test results obtained by the students and those obtained by the residency applicants for the reasons referred above and because it was the first time that this course was performed with e-learning technology. It should be advisable to compare the final score obtained by these students with that obtained by students taught in a classical way.

UNDERGRADUATE EMERGENCY MEDICINE EDUCATION IN A DEVELOPING COUNTRY: 14 YEAR EXPERIENCE FROM KUALA LUMPUR, MALAYSIA

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Of the 13 medical schools in Malaysia, the University of Malaya Medical Faculty in Kuala Lumpur is the only one currently offering a formal compulsory posting in emergency medicine in the integrated MBBS curriculum. Fourth year medical students undergo two weeks of emergency department interactive cooperative learning consisting of lectures, small group tutorials, bedside teaching, observation and practical sessions, case driven learning and participation in various emergency medical activities. The structure of this teaching programme in a busy teaching tertiary hospital is described in more detail.

The posting is concluded with an examination consisting of an oral examination, MCQs, short essay question, and an assessment of a case-write-up, as well as an attitude assessment. A yearly Mass CPR programme is also conducted. Foreign students from United Kingdom, and Australasia averaging 50 students yearly have chosen this programme as their elective postings and we have received positive feedback from both the students and their respective institutions. From our 14 years experience in conducting this programme, which the students have continuously enjoyed, we strongly support international recommendations for the inclusion of emergency medicine education in undergraduate medical curricula.

A NOVEL TRAINING PROGRAM IN EMERGENCY MEDICINE: CERTIFIED BY TUSCANY REGION / UNIVERSITY OF FLORENCE / HARVARD MEDICAL INTERNATIONAL / BETH ISRAEL DEACONESS MEDICAL CENTER

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The Italian health care system is largely socialized, with priorities and policies established both nationally and regionally. Currently Emergency Medicine (EM) in Italy is practiced predominately by physicians not specialized in EM. The specialty in EM is missing in Italy. EM is currently viewed as a specialty derived by internal medicine, and in the next years it will be recognized as an independent specialty. A collaborative project between Harvard Medical International/Beth Israel Deaconess Medical Center and the Tuscany Ministry of

Health-University of Florence/Careggi Hospital was developed in September 2002. Through this project, currently practicing Emergency Physicians (EP) with a specific knowledge base and skill set will be required to learn new competencies and possess new skills with the help of Careggi hospital's academic departments. Our aim is to incorporate these important strengths and to build upon them in an effort to expand the culture of EM in Florence and Tuscany. The new EP will improve their practice in the approach to the care of the Emergency Department patient. It is with the combined effort of all Careggi University Hospital staff that this project will achieve the aim of creating a new certified specialist EP. In three-year collaboration, this project will achieve three main goals: 1) 24 EP will be prepared to sit for the EM certification exam after participating in a specially designed educational program, termed the "certification track" (9 months); 2) a fellowship program in EM will be established at Careggi; 3) a credentialing Board of EM will be established in Tuscany. The certification board will be responsible for credentialing new EP, maintaining the continuing education of existing EP, and initially will be the core board of the new EM specialty. This program will lay the groundwork for the development of a critical group of well-trained EP trainers who will represent the core faculty for a future regional certification program.

IV KETAMINE & CSF OPENING PRESSURE

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Objective: Current guidelines advocate the performance of a lumbar puncture in every child who presents to the ED with fever ³ 38°C and signs of meningeal irritation. In order to perform this procedure in the most human and painless way we perform the procedure under conscious sedation whenever a physician qualified to perform conscious sedation is available. The current most often used drug for sedation in our PED is Ketamine. Ketamine is suspected to increase intra cranial pressure (ICP). We wanted to find out whether Ketamine increases the CSF opening pressure, and if this increase has an effect on the risk of herniation. Design: A prospective study.

Methods: Lumbar puncture was performed on all patients with suspected viral meningitis during the period between August 13 2000 and September 24 2000. During day shift on weekdays sedation and analgesia with IV Midazolam 0.05 mg/kg and IV Ketamine 1mg/kg. The rest of the LPs were performed with sedation – IV Midazolam 0.1 mg/kg only. Vital signs were recorded at arrival and prior to Midazolam injection. CSF opening pressure was measured with a manometer. Data was analyzed using Students T Test.

Results: 38 children entered the study:

			Age	Gender		Temp		pressure
With	n=27	Average	5.598395	f=8, m=19	Average	37.91304	Average	24.03704
ketamine		Max	14		Max	39.6	Max	40
		Min	2.5		Min	36	Min	8.5
		Median	4.33		Median	37.9	Median	23
		Stadev	2.755668		Stadev	1.068688	Stadev	8.849083
Without	n=11	Average	6.450833	f=5, m=6	Average	38.3	Average	19.95833
ketamine		Max	12.5		Max	39.9	Max	28
		Min	0.5		Min	36.2	Min	13
		Median	6.665		Median	38.4	Median	19.75
		Stadev	4.229026		Stadev	1.096358	Stadev	3.738366

The opening pressure in the Ketamine group was significantly (t=0.05) higher than the group without Ketamine. Conclusion: CSF opening pressure in the Ketamine group was higher, suggesting that Ketamine indeed raises ICP. However, no other signs of increased ICP were found in the Ketamine group. The group without Ketamine is significantly smaller, which can create a bias. It's worthwhile continuing this study with more balanced groups, and in other indications for LP such as intra-thecal injection, where the chances of increased ICP due to the primary conditions is decreased.

WHEN SHOULD LUMBAR PUNCTURE BE PERFORMED TO A FEBRILE INFANT LESS THAN 3 MONTHS OF AGE?

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Objective: Current guidelines advocate the performance of a lumbar puncture in every infant less than three months of age who presents to the ED with fever > 38°C and no source of infection (Peds 1993; 92:1-12). We performed a survey among pediatric emergency physicians around the US to ascertain prevailing practice regarding the performance of lumbar puncture in febrile children.

Methods: Opinions regarding the performance of lumbar puncture were surveyed for four situations: 1) a well appearing infant with a history of fever at home and no fever in the ED. 2) An ill-appearing infants with a history of fever at home and no fever in the ED. 3) A well appearing infant with a history of fever at home and in the ED. 4) An ill appearing infant with a history of fever at home and in the ED. Each group was divided to 4 age groups: 0 - 2 weeks, 2 weeks to 1 month, 1 to 2 months and 2 to 3 months. The questions were presented in multiple choice format, with room left for remarks. The physicians were asked to state their positions in the ED and their training.

Results: 207 letters were sent, 9 returned – address unknown, 6 were omitted from the survey because the address was outside the USA and Canada. 110 ED physicians responded. 27% were general pediatricians working in the pediatric ER, 72% were pediatric emergency physicians and 1% were emergency physicians. 26% of respondents were emergency department directors and 3% were fellows in pediatric emergency medicine. Most physicians will perform an LP on an infant less than 1 month old that is febrile in the Ed or appears ill. Only 3% will perform LP on an infant 2-3 months of age that is afebrile in the ED and appears well, but 75% will perform an LP if the baby appears ill. 63% will perform an LP on a febrile 1-2 months old infant if febrile in the ED even if the infant appears well.

Conclusion: there appears to be great variability in physicians' attitudes towards performing lumbar puncture on infants less than 3 months of age. Many physicians surveyed follow the current guidelines to the letter. However a growing tendency to withhold lumbar puncture in well-appearing infants who are older than 1 month of age.

PEDIATRIC HEALTH SCREENING AND REFERRAL IN THE EMERGENCY DEPARTMENT

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Introduction: Many studies have demonstrated the importance of performing preventative care in the emergency

department (ED). The primary concern in the emergency department of pediatric patients is the lack of childhood immunizations. The primary objective of this study was to identify unmet health needs in the Emergency Department pediatric patient population. The secondary objective was to determine if the guardian would accept health referrals and follow up with a doctor.

Methods: Age and gender specific algorithms were developed from the United States Department of Health, Clinicians' Book of Preventative Health Second Edition. A convenience sample of patients who presented to the emergency department was asked to participate in the study in the summer 2002. The exclusion criteria consisted of institutionalized patients, inability of parents to communicate, and those that refused. After one week the parents were followed up by telephone to find out if they made an appointment with a doctor as recommended. Data was analyzed using SPSS (Chicago, Illinois, version 10.0) and test of significance used were the paired T-test, frequency test and crosstabs. This study was IRB approved as exempt.

Results: 101 patients in the 0-11 and 94 in the 11-25 age groups were enrolled. Most of the patients were African American (48.8%) or Hispanic (50.0%) and female (51.5%). 81.8% had insurance and 74.7% had a primary care provider (PCP). Of 205, 47 needed referrals, 33 of 94 in the 11-25 age range. 61.7% of the patients needed one referrals and the rest needed 2-8 referrals. At the one week follow-up, 15 of 44 contacted made appointments. There was a significant correlation between the patient making an appointment and insurance status (Pearson =.336, p=.00) and having a PCP (Pearson= .379, p=.00).

Conclusion: 22.9% of the patients in this study were found to have unmet healthcare needs. A large number of the patients (31.9%) followed up with a physician for healthcare problems identified.

PAIN RELIEF IN CHILDREN: HOW GOOD ARE WE?

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Analgesia provision in children has been reported as suboptimal. In 1997 the British Association for Accident & Emergency Medicine (BAEM) recognised this and provided guidance for improvement. The benefits of this policy change and guidance have been evaluated.

Objectives: To assess the use of analgesia in children with acute severe pain by junior doctors (SHOs) in Accident and Emergency departments within the United Kingdom following the introduction of guidelines by the BAEM in 1997.

Design/methods: Prospective telephone survey of 43 SHOs from different A&E departments within the UK using a standardised structured questionnaire. The questionnaire consisted of 4 hypothetical clinical scenarios involving children with acutely painful injuries.

Results: The decision to prescribe analgesia was considered correct in 159 (92%) out of a possible 172 responses. The choice of drug was considered appropriate 169 (98%) out of 172 responses. Route of administration was appropriate in 158 (93%) out of a possible 172 responses. 6 (14%) SHOs' knew the correct dose of opiod for children without having to seek further advice.

Conclusions: Following the introduction of guidelines by the BAEM for analgesia in children A&E SHOs recognition of pain and the need for analgesia has improved, however there is evidence that specific teaching on how to manage pain in children is still required.

SINGLE DOSE ORAL DEXAMETHASONE IN THE EMERGENCY MANAGEMENT OF CHILDREN WITH EXACERBATION OF MILD TO MODERATE ASTHMA

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Objective: To compare the efficacy of single dose oral dexamethasone with five days of twice daily prednisolone in the management of mild to moderate asthma exacerbation in the pediatric patient.

Methods: This was a prospective, randomized, double blinded trial of children (2 to 16 years of age) who presented to the emergency department and required more than one salbutamol inhalalation therapy to treat acute mild to moderate asthma exacerbations. Subjects were randomized to receive either a single dose oral dexamethasone(Dex) (0.6mg/kg to a maximum of 18mg) or five days of twice daily oral prednisolone (Pred) (1mg/kg/dose to a maximum of 30mg). Subjects were called in 48 hours to assess progress, and re-evaluated in the emergency department in five days The primary outcome measures were the number of days needed for Peak Expiratory Flow Rate (PEFR) to return to 80% of predicted value for height, and/or the number of days needed for Patient Self Assessment Score to return to base line (score of 0-0.5). Secondary outcomes include short-term actual time to disposition, admission rate, and number of salbutamol therapies needed in ER. Other outcome measures included the number of salbutamol therapies given at home, return to ER with worsening symptoms, need for admission after initial discharge, and improvement in PIS on day five.

Results: Baseline characteristics were comparable in the Dex group (n=67, mean age= 60 months), and in the Pred group (n=67, mean age= 48.5months). When Dex was compared to Pred, during the first visit, actual time to discharge (3.5hours, SD= 1.93 vs 4.3 hours, SD=3.67), number of salbutamol therapies needed in ER(3.9, SD= 1.44 vs 3.9, SD= 1.53), admission rate (9,13.4% vs 7,10.4%), drop out because of vomiting (3, 4.5% vs 1, 1.5%) For subjects discharged home (56 vs 54), the admission rate after initial discharge was 3(5.36%) vs 1(1.86%), the mean number of days needed for PEFR to return to 80% of the predicted value for height or for Patient Self Assessment score to return to baseline(0-0.5) was 5.21(SD= 1.94, median= 5.0) vs 5.22(SD=1.71, median= 5.0)

Conclusion: In children with mild to moderate asthma exacerbations, a single dose of dexamethasone (0.6 mg/kg) is safe and efficacious and represents an attractive convenient option when compared to 5 days of oral prednisolone (2 mg/kg/day).

HOW TO ACT AT THE EMERGENCY SERVICES FACES THE SUSPECT OF CHILD'S MISTREAT

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Introduction: The syndrome of the child abuse is recognized as a social disease. It is defined as any other physical or mental disease not produced in an accidental way. It is produced by an acciono r omision to a child by his parents, tutors,

or people looking after them. It is considered abuse (a mistreat act) any act deliberate or with negligent act that private a child of his rights or necessities and interfere with a physical or mental development. In Spain 1 of 4000 children needs medical assistance due to this motive, overcoat under two years old children.

Objective: It is the responsibility of the sanitary staff to determine if the trauma is accidental or intentional, and in the latter case to notify the judicial authority immediately. With this communication we plan to: (1) Make it easy for the sanitary staff of the emergency services to make a guide of injuries to suspect the possibility of a CMS and (2) To develop a protocol of suspect , diagnostic and a legal-medical actuation.

Methodology: It have been made a bibliographic revision of reference articles of this case, as a legal normative square of the Law that it is integrated. Results: (1).-Elaboration of a risk and mistreat child's form which those registered - Child Identification, Emotional mistreat evidence (injures of physical character guide), Physical mistreat evidence (objectives injures of physical character guide), Negligence, Sexual abuse, Notify identification (2) Development of a Protocol of Mistreat suspect at a emergency service. (3) Legal actuation guide.

Conclusion: The mistreat diagnosis could be very difficult or even could cause some problems for the medical staff, but it is very important to understand that if the doctor has suspicion, it is such probability that this suspicion should be confirmed in a medical and judicial investigation and if a child is mistreated and this child can't be protected the outcome could be fatal so the implication of the medical staff is fundamental in this cases.

RESULTS OF THE FIRST 5 YEARS OF PREHOSPITAL AUTOMATIC EXTERNAL DEFIBRILLATION PROJECT IN SINGAPORE IN THE "UTSTEIN STYLE"

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Introduction: Singapore has a population of 3.67 million in a 648 square km area. In 1994, all Emergency Medical Services (EMS) ambulance officers were trained to perform pre-hospital defibrillation with semi-automated external defibrillation (AED).

Methods: All non-traumatic cardiac arrest in-patients were above 10 years old, excluding those who died and children below 36 kg. The data were collected by the ambulance officers according to Utstein guidelines.

Results: From 1st February 1994 to 31st January 1999, rescuscitations were attempted on 968 non-trauma cardiac arrests. 15% of the cases were non-cardiac origin. The overall survival rate was 40/968 (4.1%, 95% CI 2.9 - 5.6%). From 968 cardiac arrests, 22/136 (16.2%, 95% CI 10.4% - 23.5%), 18/622 (2.9%, 95% CI 1.7% - 4.5%) and 0/210 (0%, 95% CI 0% - 1.7%) survived in the EMS witnessed, bystander witnessed and unwitnessed groups respectively ($p<0.001$). Collapsed witnessed by EMS had a higher survival rate ($p<0.001$) than the other groups. The survival rate of the bystander-witnessed group was also higher than the non witnessed group ($p=0.010$). Within the EMS witnessed group, those with initial rhythm VF/VT had higher survival rate (30.6%) than those without VF/VT (4.1%). ($p< 0.001$, OR = 10.3, 95% CI 2.9-36.9). Similarly, the VF/VT's survival rate under witnessed by bystanders (4.5%) was higher than the non VF/VT (1.0%) ($p= 0.011$, OR = 4.4, 95% CI 1.3-15.4). The survival rate of patients with bystander witnessed VF/VT arrest who received bystander CPR was 9.4% compared to 1.0% from those who did not ($p = 0.037$, OR = 4.4, 95% CI 1.01 - 20.1). In the initial rhythm VF/VT group, survival rates for the various cut-off time from collapse to shock were compared. Significant survival rates were obtained at least up to 20 mins.

Conclusion: Our survival rate of bystander witnessed VF/VT arrest is comparable to the USA. Increased quantity and quality of bystander CPR rate may improve the outcome of bystander witnessed cardiac arrest.

CONTRIBUTION OF INDIRECT COMPUTED TOMOGRAPHY VENOGRAPHY TO COMPUTED TOMOGRAPHY ANGIOGRAPHY OF THE CHEST FOR THE DIAGNOSIS OF THROMBOEMBOLIC DISEASE IN TWO UNITED STATES EMERGENCY DEPARTMENTS

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Recent reports suggest that physicians in non-ambulatory settings can use indirect CT venography (CTV) of the lower extremities immediately following spiral CT angiography (CTA) of the chest to identify patients with a negative CTA who have thromboembolic disease identified on CTV. We sought to determine the frequency of isolated deep venous thrombosis (DVT) discovered on CTV in emergency department (ED) patients with complaints suggestive of PE yet having a negative CTA. This study was conducted in a suburban and urban ED where patients with symptoms suspicious for PE were primarily evaluated with CTA and CTV. A total of 800 patients were studied, including 360 from the suburban ED and 440 from the urban ED. 88 (11%) patients were diagnosed with thromboembolic disease by CTA, or CTV, or both. Seventy-three patients had a CTA of the chest that was positive for PE, 42 (5.2%) of whom had evidence of both PE on CTA and DVT on CTV. Fifteen patients (2%, 95% CI= 1-3%) had a negative CTA and were subsequently found to have isolated DVT on CTV, all of whom received anticoagulation therapy. These data suggest that indirect CT venography of immediately following CT angiography of the chest significantly increased the frequency of diagnosed thromboembolic disease requiring anticoagulation in ED patients with suspected PE.

CLINICALLY SIGNIFICANT ANCILLARY FINDINGS ON CHEST CT ANGIOGRAPHY TO RULE-OUT PULMONARY EMBOLISM. A MULTI-CENTER STUDY OF 1025 EMERGENCY DEPARTMENT PATIENTS

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In many Emergency Departments (EDs) throughout the country, chest CT angiography (CTA) has become the diagnostic imaging modality of choice to evaluate symptoms suspicious for pulmonary embolism (PE).

Objective: To evaluate the pre-study hypothesis that CTA reveals clinically significant, non-PE related ancillary findings for ED patients with symptoms suspicious for PE.

Methods: Study design—This was a multi-center, case series. Setting - The study was conducted in 2 urban and 1 suburban, academic EDs. Population - ED patients with symptoms suspicious for PE who underwent CTA during a 1-year period were reviewed. Study protocol - CTA was ordered at the discretion of the treating physician at point of care; Patients were identified by query of the electronic medical record; Two independent/blinded study physicians reviewed the final CT readings of board-certified radiologists. Study physicians categorized the non-PE findings into one of four categories according to acuity (Figure 1.) Classification of Ancillary Findings on CTA - A (Requiring specific and immediate intervention) = pneumonia or other infections, aortic aneurysm rupture or dissection, large pericardial effusion, definite carcinoma, pneumothorax, mediastinal mass, mediastinal air. B (Requiring specific action on follow-up) = new cardiomegaly, gallstones, ureteral stones, lung nodules, adenopathy, non-healed rib fractures, new lung fibrosis, solid organ mass, renal or splenic infarct, pancreatitis, cirrhosis, speculated nodule. C (Requiring no action = COPD, scarring, hepatic cysts, ovarian cysts, renal cysts, fatty liver, hiatal hernia, ventral hernia, fibrosis, sarcoidosis, asbestos related findings, fluid in the cul-de-sac, small pleural effusions, atelectasis, renal pole stones, post-operative changes. D = indeterminate

Results: A total of 1025 patients were included and the prevalence of a filling defect diagnostic for PE on CTA was 9.4% (95% CI 7.7 to 11.4%). For categorization of non-PE findings, the overall unweighted agreement was 81% and weighted agreement was 94% with unweighted kappa of 0.72 and weighted kappa of 0.80. The mean prevalence (range between sites) of ancillary findings categorized the same by two observers: A 7% (3% to 11%), B 10% (9% to 12%), C 17% (9% to 23%), D 4% (0% to 9%), no ancillary finding 47% (37% to 53%). The most common category A findings included: infiltrate or consolidation suggesting pneumonia (81%), aortic aneurysm or dissection (7%), and mass suggesting undiagnosed malignancy (7%). CTA identified more clinically significant non-PE pathology than PE (17% vs. 9.4%). When one combines non-PE and PE diagnoses, CTA identified a condition requiring specific intervention or follow-up for over 25% of our study population.

Conclusions: In ED patients with suspected PE, CTA frequently provides evidence of an important diagnosis other than PE. Pulmonary infiltrate suggesting pneumonia was the most common non-PE finding.

PROPHYLAXIS OF VENOUS THROMBOEMBOLISM IN EMERGENCY DEPARTMENT ADMISSIONS

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Introduction: Venous thromboembolism (VTE) has been inadequately studied in the Emergency Department context. Up to 80% of patients admitted through ED develop VTE. Despite this risk, and guidelines for VTE prophylaxis (PX), PX is underutilized. Given the frequency of VTE and its potential morbidity and mortality, we determined the need and use of PX using a standard risk assessment tool. We also determined the relationship between risk factors and appropriate use of VTE PX in ED admissions.

Methods: Every other admission through the ED in a private, urban, 900 bed teaching hospital for one month in 2003 was prospectively reviewed. Exclusion criteria included: requiring full dose anticoagulation, renal failure on hemodialysis, length of stay < two days, psychiatric admission, or primary physician declined review. A modified Caprini's Risk Assessment Tool was used to classify VTE risk. Appropriate PX was defined as any currently accepted medical or mechanical method of PX for those in need, and no PX if not indicated.

Results: 414 charts were reviewed with 254 meeting entry criteria. 200/254 (79%) had indications for PX. Factors related to appropriate PX were the following: Age (OR =0.97, p<0.0003), Bed Rest (OR =1.9, p<0.03), Primary Cardiovascular Diagnosis (OR =0.23, p<0.002), Primary Neurological Diagnosis (OR =0.44, p<0.03) and Standard Order Set (OR =4.1, p<0.005). In 44.9% appropriate decisions were made regarding PX, increasing to 69% in the 26 admissions that used standard order sets which included VTE PX (p=0.01). 32% of patients that required active PX received it.

Conclusions: Despite the risk for VTE, PX was started in only 32% of at-risk ED patients. Data suggests those with primary cardiovascular and neurological diagnoses are at a higher risk for inadequate PX. Future interventions, such as standard order sets, may be most effective in these higher risk patients.

BRAIN NATRIURETIC PEPTIDE PREDICTS ACUTE RIGHT VENTRICULAR DYSFUNCTION AND OUTCOME OF CLINICALLY STABLE PATIENTS WITH ACUTE PULMONARY EMBOLISM IN THE EMERGENCY DEPARTMENT

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Right ventricular dysfunction (RVD) is a major prognostic indicator of stable patients with acute PE. The aim of the present study was to investigate the value of BNP to detect RVD in patients with acute PE.

Methods. Consecutive patients with a first documented episode of acute PE diagnosed with spiral CT scan and/or high probability lung scan were included in this study. All patients underwent echocardiography, and rapid BNP test within the first hour since the admission. Acute RVD was diagnosed in the presence of > 1 of the following echocardiographic criteria: RV dilatation, paradox septal systolic motion, pulmonary hypertension, without RV hypertrophy. Patients were defined clinically stable in the absence of shock or hypotension. Exclusion criteria were > 1 of the following: history of symptomatic chronic heart failure (CHF), ejection fraction (EF) < 40%, plasma creatinine level > 1.5 mg/dL.

Results. Between September 2001 and January 2003, 48 patients were enrolled. 7 patients (15%) were hypotensive or in shock on admission, 5 of whom died during the hospital stay. The remaining 41 patients (85%) were clinically stable: 19 with RVD (39%) and 22 without RVD (46%). None of the patients without RVD died, whereas 2 patients with RVD developed shock and 1 died. In patients with RVD plasma BNP concentrations were significantly higher than in patients without RVD (809±381 vs 79±54 pg/mL, p<0.001). When

patients with hemodynamic instability were excluded, plasma BNP levels were always significantly higher in patients with RVD (719.5±406 vs 79±54 pg/mL, p<0.001). A BNP > 100 pg/mL had a sensitivity of 100%, a specificity of 77%, and a negative predictive value of 100% for the identification of RVD.

Conclusions. BNP is a useful supplementary tool for detecting RVD in acute PE. A BNP level < 100 pg/mL excludes with high accuracy patients with RVD at risk of complicated in-hospital course.

REANIMATION IN SUDDEN DEATH (BRUGADA'S SYNDROME)

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Brugada's Syndrome is clinically characterized by syncope episodes and sudden death in patients with structurally normal hearts and peculiar electrocardiogram that shows a pattern of segment ST rise in precordial derivations from V1 to V3 with shape seeming a block of the right branch or, according to other criteria, a rise at point J. These episodes of syncopes or sudden death are caused by polymorphous ventricular tachycardial crisis that appear unexpectedly and without prodromes. As for the etiology and genetic aspects of this syndrome, alterations exist in chromosome three that alter the sodium channels. Since it is a recently discovered syndrome it is difficult to provide information of its incidence and worldwide distribution, between 4 to 12% of sudden death, specially among young adults (< 50 years old) with no previous cardiovascular disease are due to this Syndrome. It can be easily diagnosed in those patients with characteristic electrocardiograms, but there are hidden forms that can be diagnosed with the administration of antiarrythmic drugs to block calcium channels. Prognosis is bad if an automatic defibrillator is not implanted, since antiarrythmic drugs do not protect the patient from new sudden death episodes. Our objective in the presentation of this case is to diffuse the experience of intensive care and rescue services (SAMUR- Civil Protection). It is based on the development and follow-up of a real case of Brugada's Syndrome, in which the patient suffers sudden death and is recovered with the use of semiautomatic defibrillator (SAD) as the first step of sanitary attention.

Clinical Case: The case of a 32 year-old patient is presented, with a personal record of bronchial asthma treated occasionally with Ventolin. Initially we are informed of the probable existence of an untreated cardiopathy. After being able to interrogate the patient, it is commented about the existence of a blockage in the right branch. The patient presents an episode of sudden loss of conscience from which he is recovered and it is evaluated by SAMUR Civil Protection Technicians, who then decide transfer for hospitalary evaluation. Just at this moment patient suffers again loss of conscience from which he is not recovered, and there is no carotidal pulse and no signs of breathing. In this situation it is decided to use the SAD, detecting ventricular fibrillation which is treated with electroshock and basic instrumental CPR up to recovery of vital signs. After hemodynamic stabilization with advanced vital support, patient is transferred to hospital. Then patient is diagnosed and treated for Brugada's Syndrome with implantation of automatic defibrillator. Due to the importance of clinical presentation and to the genetic transmission of this syndrome a study of relatives through stimulation with flecainida is carried out.

Conclusions: Since Brugada's Syndrome is of recent discovery and due to the importance of its clinical debut, it is urgent to be familiarized with it within intensive care services in order to improve sensibility in diagnosing it and be able to carry out treatment in those young patients whose first clinical manifestation is sudden death in the absence of structural caridopathy. The importance of treatment of patient with an automatic defibrillator and the importance of diagnosis in the patient's family due to genetic transmission with administration of antiarrhythmic drugs that block calcium channels (flecainide, agmaline and procaineamide).

NON INVASIVE POSITIVE PRESSURE VENTILATION (NIV) IN ACUTE RESPIRATORY FAILURE (ARF) IN THE EMERGENCY DEPARTMENT (ED)

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Several studies have proven that NIV is successful in the treatment of ARF; data about use in the ED are scarce.

Objective: Evaluate effects of NIV in pts presenting with ARF in the ED, with reference to gas exchange, intubation rate and mortality. Study design: Prospective observational.

Results: Between 01/2002 and 04/2003 87 pts received NIV, delivered with face mask, for ARF.43 pts received NIV for cardiogenic pulmonary edema (ACPE) (age 74.8±7.6), 20 for severe community acquired pneumonia (CAP) (71.1±16.5), 24 for acute COPD exacerbation (74.3±8.1). Failure defined as the need for endotracheal intubation (ET). NIV was successful in 41 pts (95%) with ACPE, in 20 (83%) with COPD, in 13 (65%) with severe CAP. Complication rare: 1 skin necrosis. -ACPE: after 1 hour significant improvement in physiological parameters was observed (PaO2/FiO2, pH, CO2, RR,heart rate, blood pressure, SpO2 - p<0.001 in all samples). 9 pts with NSTEMI were treated with NIV without complications; 6 of these showed EKG or cardiac markers alterations before starting NIV. 2 pts failed NIV trial and underwent ET. 3 pts died (after they underwent successfully NIV trial): 2 for ventricular arrhythmia and 1 for cardiogenic shock. -COPD: a significant improvement of pH, CO2, RR, HR, SBP, SpO2 was observed after 1 hour of treatment (p<0.01 for all variables). 4 pts failed NIV and required invasive mechanical ventilation. 1 pt died. -CAP: of 20 pts 13 underwent successfully NIV trial. In the success group, after 1 hour, we observed a significant improvement in PaO2/FiO2, RR, HR, SpO2 (p<0.05in all samples). No changes were found in the failure group. Lack to improve these parameters after 1 hour may be correlated with failure. Of the 7 pts that required invasive ventilation, 3 died.

Conclusions: NIV can result in early improvement of physiological parameters in ACPE and COPD.A trial in pts with ARF due to severe CAP may be tried, but if no improvement is seen in the first hour, endotracheal intubation should be started as soon as possible.

NON INVASIVE POSITIVE PRESSURE VENTILATION (NIV) VS CONTINUOUS POSITIVE AIRWAY PRESSURE (CPAP) IN ACUTE CARDIOGENIC PULMONARY OEDEMA (ACPE): A PRELIMINARY REPORT ON A PROSPECTIVE RANDOMISED TRIAL

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Background: Several studies have shown that CPAP improves vital signs, oxygenation and reduces the need for intubation in ACPE. NIV use is still controversial.

Objective: To assess the efficacy of NIV and CPAP in ACPE. Study Design: Prospective randomised.

Methods: Inclusion criteria: severe dyspnea at rest, respiratory rate > 30,PaO2/FiO2<250 in FiO2>0.5, muscular fatigue. PSV was started at 10 cmH2O and increased to reach a Vte of 6-8 ml/kg and to reduce RR; PEEP/CPAP was started at 5 cmH2O and increased to keep SpO2>92%; FiO2 was started at 1 and decreased maintaining SpO2 > 92%.

Results: 32 pts were randomly assigned to CPAP or NIV through a face mask. At the randomisation the two groups were homogeneous for physiological parameters except for PaO2/FiO2 lower in the CPAP group (93±28vs128±46; p=0.023). After 1 hour of treatment a statistically significant improvement was observed in PaO2/FiO2,RR,heart rate, systolic blood pressure,SpO2 in both groups. In hypercapnic pts a significant improvement in CO2 was observed, after 1 hour: CPAP:73±15 mmHg to 56±10;p=0.008-NIV:68±16 mmHg to 55±6;p=0.03.No difference were observed in mean duration of treatment (5±3 vs 8±7 hours)and hospital LOS (10±8 vs13±23days),though a trend toward an inferior duration of treatment was observed in NIV group. LOS in the HDU was inferior in NIV group: 2.6±1.7vs4.4±2.4; p=0.045. 4 pts failed the trial: 1 (6%) in the NIV group and 3 (18%) in the CPAP. 4 pts died (1 acute myocardial infarction and 3 ventricular arrythmia): the cardiovascular condition was fatal although they underwent successfully the trial. 5 pts in CPAP and 4 in NIV group had NSTEMI and were treated successfully; 1 of these pts died after the trial with non invasive respiratory support.

Conclusions: Both NIV and CPAP result in early improvement of physiological parameters and are an effective treatment in pts with ACPE. CPAP may be associated with a higher percentage of failures and with a higher LOS. CPAP and NIV aren't harmful in NSTEMI.

NON INVASIVE POSITIVE PRESSURE VENTILATION (NIV) IN ACUTE EXACERBATION OF CHRONIC OBSTRUCTIVE PULMONARY DISEASE (COPD) IN THE EMERGENCY DEPARTMENT (ED)

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Background: CPAP/PEEP has shown its efficacy to contrast the inspiratory threshold imposed by PEEPi in COPD pts;PSV is useful to unload respiratory muscles. Many studies have proven NIV efficacy to improve gas exchange, reduce WOB and reducing the % of endotracheal intubation and ICU admissions. To day data on the use of NIV in the ED are scarce.

Objective: to assess the efficacy of NIV in the treatment of COPD exacerbation in pts presenting in the ED. Study Design: prospective observational.

Methods: 24 pts were studied. NIV was delivered trough a face mask, added to standard medical therapy, with the following parameters: PSV started at 10 cmH2O and increased to reach a Vte 6-8 ml/kg and to decrease respiratory rate (RR); PEEP was started at 3 cmH2O and increased to a maximum value of 5-6 cmH2O. FiO2 the lowest possible to keep SpO2 > 92%. We evaluated physiological parameters at the admission, after 1 hour, 4-6 h and 24-36 h after NIV was started. Data analysis:t-test for paired samples and ANOVA for repeated measures were used.

Results: mean age 74.3±8 yrs, SAPS score 39.5±6.9. Mean duration of ventilation was 35.7±20.9 hrs. After 1 hour of treatment a significant improvement in pH, CO2, RR, SpO2 and heart rate was observed. 4 pts (16%) failed to improve and required endotracheal intubation and conventional mechanical ventilation. 1 of these pts died, while no one of the pts that underwent successfully NIV trial died. The initial severity of the disease (low pH and severe hypercapnia) doesn't seems to correlate with a negative prognosis, while lack to improve in pH, CO2 and RR, after 1 hour of treatment, may be a predictor of insuccess. Pts tolerated well facial mask ventilation and no complications were observed.

Conclusions: NIV is usually started in the ICU. NIV may be started and continued, if necessary, in the ED, without complications or deleterious effects.A closely monitoring of the pts is necessary to prevent delay in intubation when the trial fails.

USE OF NONINVASIVE POSITIVE PRESSURE VENTILATION IN EMERGENCY DEPARTMENT: A PROSPECTIVE CLINICAL TRIAL

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The management of acute respiratory failure is common in the Emergency Department setting. Traditionally, endotracheal intubation (ETI) and mechanical ventilation have been employed in patients with this syndrome and it is the gold standard of treatment. However, ETI is associated with various adverse outcomes including infectious and noninfectious complications. Recently noninvasive positive pressure ventilation (NIPPV) has been used as an alternative method of providing ventilatory support but their results may not be applicable yet to the general patient population evaluated in ED; we need other works to confirm the benefit of NIPPV. Materials And

Methods: This study was conducted in ED of A. Gemelli Hospital in Rome. All patients with severe respiratory distress were evaluated by an Emergency Physician and Anesthesiologist for NIPPV inclusion criteria. A respiratory rate greater than 35 breaths per minute, and one of the following: pH <7.35, PaCO2 >45 mmHg, PaO2 <60 mmHg or PaO2/IO2 <200. Patients were excluded from this investigation if they had any of the exclusion-criteria published by ATS Consensus Conference on NIPPV (Thorax, 2000). Chest X-rays

was made as soon as possible to confirm etiology of distress. NIPPV was conducted initially in Emergency Room during stabilization time (first hour), than patients were evaluated for indication to ETI/ICU or NIPPV/Sub-ICU. Arterial blood gas sampling was made at time 0, 1 hour and at changing of clinical conditions.

Results: We enrolled 26 patients (16 COPD, 10 Acute Pulmonary Edema). NIPPV was made by PSV+PEEP in facial mask or helmet. 7 patients (27%) were intubated after 1 to 28 hours of NIPPV, 19 (73%) were succesfull treated and discharged in spontaneous breathing. We analized pH, PaO2, PaCO2, PaO2/IO2, Respiratory rate value that result significantly improved between end and basal time ($p<0.01$). No statistical differences we found between basal and 1 hour time.

Conclusions: However patient selection criteria are critical to the success, NIPPV is a useful technique of respiratory support and it is at the moment the only alternative technique to ETI, its complications and cost.

CPAP BY "HELMET": OUR EXPERIENCE IN THE EMERGENCY DEPARTMENT

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Acute cardiogenic pulmonary edema (ACPE) is a frequent cause of respiratory failure among patients who access the emergency department. The necessity of reducing the use of the endotracheal intubation (ETI), took to the development of new models of non-inasive ventilation. Aim of our study was to evaluate if CPAP with helmet is higher than medical treatment alone, in patients with ACPE. We enrolled 15 patients (7 cases and 8 controls). Seven consecutive patients were treated by CPAP with helmet (group 1), besides conventional therapy. Eight patients were treated only by conventional therapy (group 2). We considered HR, RR, SBP and DBP, pH, SaO2, PaO2 and PaCO2 in basal conditions, after 1 and 4 hours. The basal BGA and clinical parameters were similar in the two groups. Both the groups showed an improvement of the cardiovascular and BGA parameters at 1 and at 4 hours. The CPAP took to a quick and incisive improvement of the clinical conditions. At the 1st hour, group 1 showed a significant amelioration of pH, of SaO2, of PaO2/FiO2, and a relevant reduction of PaCO2; in group 2, only the improvement of PaO2/FiO2 ratio reached the statistical significance. The patients of group 1 showed at the 4th hour normal pH, PaO2, SaO2, PaO2/FiO2 ratio and significant positive cardiovascular effects, except for PaCO2; those of group 2 showed a significant improvement of BGA parameters, but a less change of the cardiovascular ones. Between such patients, one died in the ED.

All the patients treated with CPAP were admitted to specific wards, after the ED. During hospitalization 2 patients died. The treatment with CPAP appears faster than the conventional therapy to restore a satisfactory cardiopulmonary function, but the outcome and the length of the hospitalization appear similar among both groups. Our study confirms that the CPAP with helmet improves many cardiovascular and pulmonary indexes of patients with ACPE and is potentially able to reduce the ETI. Significant differences in the mortality and in the duration of the hospitalization, between the two groups, didn't emerge in this study. The CPAP can therefore constitute the bridge of connection between the simple O2-therapy and the invasive mechanical ventilation, representing an ideal technique for the management of these patients in the ED.

OUTCOME EVALUATION OF NONINVASIVE POSITIVE PRESSURE: A RETROSPECTIVE ANALYSES

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The management of acute respiratory failure is common in the Emergency Department setting. Traditionally, endotracheal intubation (ETI) and mechanical ventilation have been employed in patients with this syndrome and it is the gold standard of treatment. However, ETI is associated with various adverse outcomes including infectious and noninfectious complications. Recently noninvasive positive pressure ventilation (NIPPV) has been used as an alternative method of providing ventilatory support but their results may not be applicable yet to the general patient population evaluated in ED; we need other works to confirm the benefit of NIPPV.

Materials And Methods: We analyzed all of patients with severe respiratory distress undergone to NIPPV between April 2001 to April 2003 in ED of Policlinico A. Gemelli of Rome. NIPPV was conducted initially in Emergency Room during stabilization time (first hour), than patients were evaluated for indication to ETI/ICU or NIPPV/Sub-ICU. Arterial blood gas sampling was made at time 0, 1 hour and at changing of clinical conditions.

Results: We enrolled 26 patients (16 COPD, 10 Acute Pulmonary Edema). NIPPV was made by PSV+PEEP in facial mask or helmet. 7 patients (27%) were intubated after 1 to 28 hours of NIPPV, 19 (73%) were successful treated and discharged in spontaneous breathing. We analyzed pH, PaO2, PaCO2, PaO2/IO2, Respiratory Rate value that result significantly improved between end and basal time ($p<0.01$). No statistical differences we found between basal and 1 hour time.

Conclusions: In our study, we have not found any statistically differences in two patients groups: NIPPV patients and patients intubated after NIPPV. We need more studies to determine successful criteria to predict outcome of the patient NIPPV candidate.

ACCREDITATION OF EMERGENCY MEDICINE IN PORTUGAL: ACTUAL DATA

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The Committee for Accreditation of the Competence in Emergency Medicine, Portuguese Medical Association

The Portuguese Medical Association started to accredit Physicians in the area of Emergency Medicine in May 2003. The accreditation model, called "Competence in Emergency Medicine" is accessible to all specialties, since these Physicians comply to the standards in Theoretical and Practical aspects previously defined. This study analyzes data concerning the accreditation, focusing major aspects as they are the percentage of approval of the candidates and the distribution by specialties, reasons for non-approval, regional differences, participation in various sectors, as for example, pre-hospital and intra-hospital Emergency Medicine. It could be concluded, that three major groups of Physicians were accredited: 1) Hospital-based Physicians (Anaesthesiology, Intensive Care,

Internal Medicine and Surgery) with pre- and intrahospital experience. 2) Hospital-based Physicians (Anaesthesiology, Intensive Care, Internal Medicine and Surgery) without any and pre-hospital experience. 3) General Practitioners with pre-hospital, but without intra-hospital experience. According to these data, it will be necessary to improve teaching in Emergency Medicine, especially in the pre-hospital area, giving General Physicians the possibility to train in Operating Theaters and Intensive Care Units.

IS EMERGENCY MEDICINE RESIDENCY PROGRAM IN IRAN ASSOCIATED WITH A CHANGE IN RESIDENTS' CLINICAL PERFORMANCE?

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Background: Emergency medicine is a new specialty in Iran with its residency program beginning only two years ago. Like many other countries, here in Iran the program faced a great challenge in terms of both necessity and efficacy. Controversies developed and still exist regarding the question of whether the program can make a difference in the residents' attitude and clinical performance. This study is designed to quantify improvement in the clinical arena caused by the emergence of this new program.

Study Objective: We sought to determine whether the residents' perception of patient outcome and diagnostic accuracy improved during their training using a series of simulated clinical scenarios.

Methods: Each resident from the only EM residency training program in Iran was given a convenience sample of 20 clinical scenarios similar to real ED cases. This was done near the end of the academic year when some general practitioners had been admitted but not entered the EM residency program yet. These prospective residents were also given the same cases. They were asked to make a provisional diagnosis and decide on a plan for appropriate diagnostic and therapeutic actions based on the information given. The gold standard was the diagnosis made and the actions taken by two members of the faculty. In order to consider the confounding factor of job experience we also asked for the length of time each participant had spent practicing medicine (either as GP or resident). Then a regression model was used for multivariate analysis.

Results: Data were obtained on 23 total scores from 9 postgraduate year 2(PGY-2), 5 PGY-1, and 9 prospective EM residents. The mean score was82.33 (± 2.64) for PGY-1, 74.80 (± 9.60) for PGY-2, and 64.33 (±5.85) for would-be EM residents (P=.001). A significant correlation between job experience (as either GP or resident) and the mean score was not found. In multivariate analysis, after adjustment for the years of job experience, a significant association between the post-graduate-year and the score was found [score=9 years+65, adjusted R square=0.66, P<.0001].

Conclusion: Resident clinical performance in the ED improved during training on the basis of the diagnosis and management of simulated cases.

CAMPUS BASED EMS: A SURVEY BY THE NATIONAL COLLEGIATE EMS FOUNDATION

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Study objective: Campus based EMS (CBEMS) is a unique model for delivery of prehospital care. The National Collegiate Emergency Medical Services Foundation (NCEMSF) was founded to serve as a resource for CBEMS groups. NCEMSF created a web based data collection system to gather descriptive data on CBEMS.

Methods: An internet survey was conducted of CBEMS groups based at the NCEMSF homepage. Data was collected on numerous variables. Each school had a unique identifier and a contact person identified to verify data as necessary.

Results: A total of 175 groups entered information into the database. 148 groups were identified as providing CBEMS. The other 27 groups were excluded on the basis of not providing EMS service or not being collegiate based. The level of service was: First Responder 8.8%, Basic Life Support 69.9.2%, Intermediate Life Support 5.1.%, Advanced Life Support 16.2%. Transport capabilities were provided by 29.1% of CBEMS. Average response time was estimated at 2.47 (95 %CI 2.17-2.77) minutes. Early defibrillation via AED or ALS was available by 63.5% of CBEMS. 35.1% of CBEMS provided service to the community beyond the campus. 36.5% of the services operated 24 hours a day 7 days a week. The average call volume per year was 367.5 (95%CI 302.5-432.7) responses. Each group averaged 35.3 (95%CI 30.6-40.0) members. Over the past 5 years, an average of 4.3 new CBEMS groups were formed per year. 11 CBEMS were based at international schools.

Conclusions: CBEMS may be an under utilized resource that may be able to provide rapid response of prehospital emergency care, including early defibrillation. These systems may be considered in times of disaster. Limitations: More information should be evaluated regarding acuity of patients and nature of calls.

PROCEDURAL PROFICIENCY AFTER PARTICIPATION IN INVASIVE PROCEDURE LABS

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Background: Participation in animal based procedure labs as part of residency training has been documented to improve resident confidence and knowledge of procedures. Such labs have been shown to be relevant training for procedures in humans. Few reports evaluate resident performance of invasive procedures.

Objective: To evaluate procedural proficiency after participation in a procedure lab. Methods: A monthly animal based procedural training lab was offered to residents during their Emergency Medicine (EM) residency training. This lab included more than 15 procedures (intraosseous line placement, venous cut-down, EKG-guided pericardiocentesis,

sonographic evaluation of pericardial effusion, thoracostomy, thoracotomy, pericardiotomy, open cardiac massage, cardiorrhaphy, blunt dissection and cross-clamping of the aorta, diagnostic peritoneal lavage, retrograde intubation, cricothyrotomy, lateral canthotomy) using a live animal model. Senior residents who had participated in the lab at least once were silently critiqued during an invasive resuscitation lab. A case preceded each procedure. Two EM attendings not affiliated with either residency and blinded to the residents' training profiles evaluated each resident and procedure with a standardized score sheet of "critical points". No feedback or instruction was offered during the evaluation. Each evaluation lab was not more than two hours.

Results: N=10. Each resident received a cumulative score for all procedures completed. Residents who had completed three or less labs had a mean score of 41.6. (Median 34). Standard deviation 13.5. Residents who completed the lab four or more time had a score of 65.3 (median 79.5). Standard deviation 26.1. T-Statistic 0.87.

Conclusion: Residents who attended an animal based procedural training lab three or more times appear to have an improved score over those who took it three or fewer times. Because of limited numbers, these scores may not be statistically significant.

A NOVEL APPROACH TO CONDUCTING EMERGENCY MEDICINE RESEARCH. UCLA STROKE STUDENT RESEARCH PROGRAM

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Emergency Medicine has witnessed an explosive growth since its development as a specialty in 1978 in the United States. Coupled with the expansion of EM in the US has been an increasing emphasis on academic scholarship and clinical research. As utilization of emergency services has escalated, the resulting ED overcrowding has impacted patient care and physician productivity. The success of clinical studies is constrained in a congested, overcrowded ED. A novel approach to conducting clinical EM research has been devised at UCLA. The UCLA Stroke Student Research Program uses undergraduates as research associates to conduct state-of-the-art research and facilitate high-level care while providing an excellent opportunity for students. The program, founded in 1993, has evolved into an on-going highly selective program with 20 student volunteers and 5 coordinators who staff the ED 8am to midnight 7 days per week, a website, and a dedicated group of faculty mentors. Students are recruited from the UCLA undergraduate campus and undergo training in stroke recognition, evaluation, physiology and essentials of clinical research. By employing undergraduates as an alternative source of manpower, this program in stroke exemplifies an innovative approach to conducting research that can be expanded to other disease states where timing of intervention is critical.

INDEX CARD SURVEY: A VALUABLE TEACHING AND LEARNING TOOL FOR BOTH INSTRUCTOR AND STUDENT

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Purpose: To provide feedback in an efficient and anonymous manner in order to help instructors improve their courses and teaching performances.

Methods: Second year medical students were asked at the end of an Emergency Medicine Procedures elective to take "two minutes" to write down two positive and two negative aspects of their experience. Each session consisted of a one-hour lecture followed by one hour of practical experience.

Results: The comments covered the following areas and were remarkably consistent in their content. Skill Sessions (24 comments): Students ranked skills sessions in decreasing order of preference as suturing, peripheral venipuncture, intubation, lumbar puncture, foleys, casting and central lines. Instructors (17): The student to faculty ratio was 1:6, and the students appreciated close expert supervision and immediate feedback. (35% of positive comments identified individual instructors). ED shift (4): Students were encouraged to perform procedures learned during class under the observation of a faculty member and given immediate feedback. Only 4% of positive comments and 4% of negative comments addressed the ED shifts. Logistics (26): The largest number of negative comments (63%) addressed timing, supplies, and facilities. Rooms were scheduled based on available space at a county hospital, and were often less than ideal in terms of size and background noise. Setup and breakdown time was increased by changing venues.

Conclusion: An index card survey can provide valuable teaching and learning opportunities. Here it only took two minutes for the students to evaluate this elective and we gained an enormous amount of information. The course directors learned how much logistics impact student experience and which skills sessions were most helpful. The students listed many more positive aspects overall and reinforced their positive experience by writing it down.

EMERGENCY MEDICINE AND DISASTERS (NOT JUST ABOUT RESPONSE)

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This paper argues that emergency medicine and disaster medicine, are not two specialties but a part of an integrated emergency management response. While emergency physicians and pre-hospital EMT personnel are traditionally involved in response they also have a role in community education in the preparedness phase. The public health role of emergency care providers is often underestimated and counter disaster and counter terrorism input must be a key role for emergency physicians and their liaison with the community. This paper will describe the aspects of appropriate disaster planning, including public health, mental health and communications systems and how emergency care providers must be integrated into a "whole of health" model. The 4 phases of emergency management are described and how emergency

medicine is involved in all aspects of prevention, preparedness, response and recovery. In the response phase, a continuum of care model is described, ensuring all aspects are appropriately integrated. Call-receipt, response capability, triage, treatment and transport to appropriate health care facilities must be seen within a strategic planning framework. While "emergency management" is often an eclectic mix of providers, when reviewed as part of an integrated emergency management model, it can be a strength rather than a weakness. The paper describes the communication innovations in NSW how improved communication systems can achieve better integration. *Dr David Cooper is the Director of the NSW Health Counter Disaster Unit. He is a specialist emergency physician.

CORRELATION BETWEEN REVISED TRAUMA SCORE AND CLINICAL INDICATORS INCLUDING CARBOXYHEMOGLOBIN AND OXYGEN INDEX IN A LARGE SCALE SUBWAY FIRE

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Purpose: The purpose of this study was to identify the meaning of the Revised Trauma Score (RTS) and determine its correlation with clinical indicators including Carboxyhemoglobin and Oxygen Index in cases of noxious gas inhalation in a large scale fire in closed space.

Methods: We studied 35 patients who were transported to a wide, regional emergency medical center from the subway fire in Daegu city that occurred on 18, February, 2003. RTS was calculated using the Glasgow coma scale score and vital signs on arrival to the emergency department (ED). Arterial Carboxyhemoglobin (CO-Hb) level was determined in the ED and the correlation with RTS was investigated. Two days later Oxygen Index was calculated from arterial blood gas analysis and oxygen concentration provided, and we examined the correlation with RTS. Paired t-test was used for the statistical analysis using SPSS for windows program.

Results: The mean patient age was 32, and the sample included 12 males and 23 females. Three patients were dead on arrival (DOA) and another three patients had cardiac arrest requiring cardiopulmonary resuscitation, two of them expired in ED and one expired 2 days later after return of spontaneous circulation in ED. Three patients were transferred from other hospitals. Six patients were treated in the intensive care unit; four of them were supported by mechanical ventilation. The average RTS, except for those DOA, was 10.53. The average level of CO-Hb was 6.25g/dl. The RTS and CO-Hb level were well correlated with meaningful correlation coefficient ($r = -0.624$, $p<0.001$). The average Oxygen Index was 214.7 and correlated with RTS well.

Conclusion: RTS, as a triage tool and indicator of severity, reflects early levels of CO-Hb and correlates with Oxygen Index meaningfully in cases of a fire disaster in a closed space. The degree of severity of some clinical indicators can be foreseen by initial RTS in a large scale subway fire.

DISASTER PREPARATION IN THE CAPITAL CITY OF TURKEY, THE COUNTRY OF EARTHQUAKE DISASTER PLAN OF HACETTEPE UNIVERSITY HOSPITAL

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Objective: Turkey is facing the everyday threat of different kinds of disaster owing to its geographical and sociological situation. In recent years tens of thousands of people died or were injured in two big earthquakes. The large losses in the disasters are thought to have resulted from the lack of personal, regional or national preparation.

Methods: Hacettepe University Hospital is one of the biggest hospitals in the capital city Ankara, with a 1300-bed capacity. While the disaster plan was being prepared, the specific disasters that can affect our region were identified. Regional and national disaster plans of other countries were examined. Large earthquakes in our country, and problems or deficiencies seen in other disasters were evaluated. A disaster plan manual was prepared with the assistance of the hospital management and the emergency medicine workers.

Results: The plan calls for installation of a mobile hospital on a safe area at the hospital campus, in the event that our hospitals are damaged during the earthquake. In addition to a personal director, security, communication, press, planning, resource supply, technical, logistical and financial support units, a total of 66 personnel were assigned to the units of polyclinics, laboratory, theatres, emergency treatment and triage under the control of an operation director and under the leadership of a disaster president. Duties before and during the disaster were explained at educational meetings presented to the people assigned roles or involved in the plan. Plans were made to prepare necessary technical support, lodgment, food and drugs to be ready and available before any disaster. The disaster plan manual was delivered to all related units of the hospital.

Conclusion: One of the problems that emergency medicine workers will face is the chaotic ambiance that is seen during disasters. If emergency service and hospital disaster plans have been prepared with assigned duties, and assigned personnel established beforehand, this potentially chaotic situation will be minimized at the moment of disaster.

ROUGH AND READY 2003: IMPLEMENTATION OF A CIVILIAN-MILITARY OPERATIONS CENTER (CMOC) DURING A MULTINATIONAL DISASTER EXERCISE

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Background: Disasters such as earthquakes, severe hurricanes, trans-border conflicts, and certain acts of terrorism are likely to result in requests for international medical assistance. In the wake of a large-scale disaster, rapid access to people affected by the event and the timely provision of relief supplies are critical tasks.

Objective: To demonstrate CMOC command and control during a multi-national disaster exercise; to evaluate the interoperability of the CMOC model in coordinating an international disaster response; and utilize the incident command system (ICS) in all levels of the disaster response. Design: Prospective, observational study. Setting: Yavoriv Training Center, L'viv, Ukraine. Methods: 115 military and civilian emergency response personnel from USA, Ukraine, Azerbaijan, Georgia, Moldova and Uzbekistan met in Ukraine June 1-7, 2003 to conduct a tabletop earthquake disaster exercise in preparation for a large-scale field exercise scheduled for June 2004. An international joint CMOC was established under Ukrainian control to coordinate search and rescue operations and direct resources following a large-scale earthquake in the Western Ukraine. International aid was requested and the CMOC was tasked with staging and allocating this aid. Exercise controllers observed, evaluated and recorded the performance of the CMOC and all participants in real-time. Daily section debriefings were held at the end of each operational period. A final group debriefing was conducted at the conclusion of the exercise.

Results: Language and cultural barriers delayed effective implementation of the CMOC for 36 hours. Lack of experience with ICS and general inexperience with the large scale of this exercise stalled movement of critical supplies into the Ukraine. Technical problems with communications satellites and computer hardware hampered efforts to move relief supplies from the border staging areas. Initial disaster assessments were insufficient for planning. By the 4th operational period, however, CMOC provided effective command and control.

Conclusions: CMOC model can provide effective command and control in a multi-national disaster exercise. Success is dependent on preparedness, practice and cooperation.

BUILDING UP THE NATIONAL VOLUNTARY SECTOR AS A PARTNER IN THE MEDICAL MANAGEMENT OF DISASTERS

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In Romania the voluntary sector holds a minor place in intervening during disasters. Changing the response plan could make disaster management more effective and efficient. This requires identifying causes and potential situations, and adopting viable solutions that have been developed in other countries. We analyzed the relationship between the Romanian Voluntary Sector and the Management of Disasters to elucidate the current structure of the sector in this area, the implication and the roles assumed, the level of collaboration (both intrasectorial and with the public sector), the efficiency of the actions and the constraints the sector faces. The Romanian voluntary sector has an insufficiently developed potential. The solution is starting a solid partnership between the public medical sector and the voluntary sector, and the initiative belonging to the former. This solves each of the causes of the problem and maps out concrete directions for making up NGOs as a partner in the medical management of disasters.

Concrete directions: The leading principle is the plenary implication of the NGOs at each level of disaster management: prevention, preparedness, response and rehabilitation. This means a sequential identification of the concrete ways through which the NGOs could contribute. For the stage of response, their intervention is minutely included in each section of the chain of help, and on the basis of the essentials of the scheme are traced the co-ordinates the medical sector must insist on within the stages of prevention and preparedness. In this way the Voluntary sector can be prepared as a steady, consistent, organized and competent partner.

Conclusions: As a result, the united efforts of the two entities will substantiate an integrated and functioning national system responding to disasters, whose priceless value consists of improving human survival.

ORGANIZATION OF EMERGENCY SERVICES FOR EXCEPTIONAL SOCIAL EVENTS: A TEST FOR PLANNING AN "INTEGRATED" DISASTER RESPONSE SYSTEM

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In our country, the different services involved in disaster emergency response present several peculiarities: EMS, Police, Fire Dept., Coast Guard, Red Cross, etc., have different headquarters, phone emergency numbers, radio-channels, guidelines. It is clear that, in the case of a disaster, the need for integrated action would be hampered by several obstacles, mostly regarding communication problems and the lack of common intervention protocols. The organization of an emergency system for an exceptional social event such as the show of the Acrobatic National Air Squad (Imperia, 6/14/03) presented an opportunity to test our disaster planning: large audience (50,000 estimated people over the normal population), hypothetical dimensions of an incident (remember Ramstein 1988), geographical complexity of the involved territory (coastline, sea, freeway, highly populated areas). During preparatory meetings, an "integrated headquarter" was created with representatives of all Services, radio-linked to every single headquarter. We established a dedicated radio-channel (supplied by the Italian Red Cross), to be used for all emergency event-related communications. Three different triage-areas and several escape-paths were previously identified, and guarded by police forces. We established an integrated action protocol for any accident in the sea. We created two units of integrated advanced rescue (air: EMS+Fire Dept. helicopter; sea: EMS+Coast Guard cutter), three ALS medical territorial units (EMS+Red Cross ambulances), several "first aid" units (EMS nurses+Red Cross ambulances). The absence of a major incident made this organization redundant. Nevertheless the test allowed us to identify some "critical points", and will be useful for future local disaster planning. Once more, the need for common training emerges, to share knowledge and guidelines, and to verify the feasibility of integrated action in different conditions.

PREHOSPITAL MORTALITY IN AN EMS SYSTEM USING PRIORITY DISPATCHING WITH ALTERNATIVE URGENCY CATEGORIES

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Background: Priority dispatching of was introduced in the 1980´s but its use is still limited. In a majority of dispatching centres an ambulance is still dispatched immediately in all cases. This results in the need of overstaffing ambulance services in

order to meet the target response times. The purpose of the study was to report prehospital death rates in different urgency categories and to evaluate if deaths in alternative urgency categories could have been prevented by a faster ambulance response.

Methods: Calls were prioritised into four urgency categories from A to D. Prioritising was based on the chief complaint (e.g. chest pain, shortness of breath) and on the patient's current condition . A and B calls were given an immediate response with blue light and siren with a target response time of maximum 8 min. In C and D calls a basic ambulance was dispatched without blue lights and siren. In C category dispatching was done immediately but in D calls when a suitable ambulance was available. The maximum target response times were 20 and 90 min, respectively. All ambulance calls between 1.1.1999-31.12.2002 were included.

Results: During the study period 151 931 calls were prioritised (category A 8677 calls, B 41 005, C 71 994 and D 30 255). Sudden cardiac arrest was confirmed in 1446 cases of which 436 (30,2%) survived to hospital. Death before reaching hospital occurred 451 times in A category, 468 times in B category, 81 times in C category and 10 times in D category. Respectively, the prehospital death rates per 1000 calls were 52,0 (A), 11,4 (B), 1,1 (C) and 0,3 (D) p<0,0001. The results of the analysis on the preventability of deaths in categories C and D will be presented during the congress.

Conclusions: Priority dispatching with alternative urgency categories in which an ambulance in not dispatched with blue lights or siren or dispatching is delayed until a suitable ambulance is available is associated with low prehospital death rates.

ACCURACY OF ARRHYTHMIA RECOGNITION IN PARAMEDIC TREATMENT OF SUPRAVENTRICULAR TACHYCARDIA: A TEN-YEAR REVIEW

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Objectives: To examine trends in paramedic rhythm misidentification rates in the use of adenosine for presumed paroxysmal supraventricular tachycardia (PSVT) over a 10-year period, and determine variables associated with rhythm misidentification.

Methods: Retrospective analysis of all cases in which paramedics treated presumed PSVT with adenosine from 1993 to 2002. Rhythm strips were categorized as narrow or wide complex and regular or irregular. Appropriate use of adenosine was defined as narrow complex regular tachycardia with no visible p waves and rate greater than 140 beats per minute (bpm). Variables of interest were: age, gender, race, time of day, initial heart rate, previous medical history of rapid heart rate or palpitations, and adverse reactions.

Results: N =224. Mean age= 59 years (range 15-90); 166 (70%) female; predominantly Caucasian. The majority (54%) of patients had initial heart rates of 161-200 bpm. Forty-nine percent of the patients had a previous history of PSVT. Inappropriate use of adenosine occurred in 45 (20%) of cases. Misidentification rates per year ranged from 9% to 31% with the lowest rate occurring after an education program on tachydysrhythmias. An initial heart rate of <160 bpm (X2= 15.58 p< 0.001) and absence of a past medical history of either fast heart rate or palpitations (X2= 11.35 p= 0.001) were associated with inappropriate use of adenosine. Age, gender, time of day, and adverse effects were not found to be associated with inappropriate administration of adenosine. After elimination of the misidentified rhythms, the overall conversion rate with adenosine was 83%.

Conclusion: Paramedics in this EMS system are more likely to use adenosine appropriately for patients with initial heart rates of >160 bpm and a previous history of rapid heart rate or palpitations. Further studies are required to identify factors associated with rhythm interpretation errors in the prehospital setting as well as to evaluate error reduction strategies.

OUT-OF-HOSPITAL DOCUMENTATION OF VITAL SIGNS IN TRAUMA

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Study Objectives Trauma scoring is used for prediction of survival and comparison of results of trauma care. Revised Trauma Score (RTS) is based on respiratory rate (RR), Glasgow Coma Scale-score (GCS) and systolic blood pressure (SBT). Out-of-hospital care in severe trauma is by an anaesthesiologist on a mobile emergency care unit (MECU). The aim of the study was to evaluate the documentation of these values in severely injured patients before out-of-hospital treatment.

Methods: An observational study of trauma patients triaged to the trauma centre at the University Hospital of Aarhus in 1998-2000. The first registered values of GCS, RR and SBT from the out-of-hospital data were noted. Analysis by c2-test.

Results: A total of 741 patients were included. The MECU treated 544 of these and in 91 cases endotracheal intubation was performed on scene by the doctor. GCS was documented in 518 (95.2 %) patients attended by the MECU versus 137 (69.5 %) of the others (p<0.001); RR in 299 (55.0 %) MECU patients vs. 52 (26.4 %) (p<0.001); data sufficient for RTS was found in 267 (49.1 %) of the MECU patients vs. (22.3 %) (p<0.001). RTS was possible in 44.0 % of those intubated and 50.1 % of those not intubated (ns).

Conclusion: Out-of-hospital registration of vital signs needs to be improved. Modifications or alternatives to RTS are needed because RTS cannot be achieved after endotracheal intubation and sedation.

IMPACT OF AN EMS PHYSICIAN AT MASS CASUALTY INCIDENTS

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Objective: To determine the impact of an emergency medical service (EMS) physician at the scene of mass casualty incidents (MCIs) on ambulance utilization.

Methods: We performed a retrospective observational study of MCIs (Defined as an incident producing 20 or more patients, the potential to produce multiple patients, or any unusual circumstances) in NYC from January, 2001 to July, 2002. Data from the Fire Department City of New York EMS Command computer aided dispatch system and Office of Medical Affairs were reviewed. Outcomes (treatment and transport trends) were categorized by the presence of an EMS physician. Data from the World Trade Center and crash of American Flight 547 were not included.

Results: 66 incidents were reviewed. Types and incidents included ground transport incidents/MVA (42.4%), construc-

tion/structural collapse (16.6%), aircraft incidents (3.0%), and others (16.6%). A total of 1,070 patients were identified. An EMS physician arrived at 56 (84.8%) incidents and 937 patients were identified. With an EMS physician present, 446 (47.6%) patients were transported to the hospital, 179 (19.1%) patients refused medical aid (RMA), and 312 (33.3%) patients were triaged, evaluated, and released by the on scene physician. Of the incidents without an EMS physician, 133 patients were identified. 121 (91%) patients were transported to the hospital, 12 patients RMA, and 50 ambulances were utilized. Based upon the estimate of three patients per ambulance, 167 ambulance responses were saved. These ambulances were kept in service for other 911 emergency responses. No negative outcomes were reported nor were any complaints generated.

Conclusions: Inclusion of an EMS physician in the response matrix for mass casualty incidents can result in a significant reduction in transportation requirements and improve ambulance availability.

MULTIINJURED PATIENT ASSESSMENT IN PREHOSPITAL LEVEL THE EVALUATION OF I.S.S. (PRELIMINARY DATA)

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Purpose: To define if evaluation of multi-injured patient with ISS (Injury Severity Score) in the Prehospital space is safe enough to estimate the importance of the damage that happens in the patient.

Material-Method: We enrolled a random sample of 100 patients that were admitted to the First Surgical clinic of our hospital, over the last 5 years. In all patients the ISS was calculated in the Prehospital setting by the Emergency Prehospital Physician and was correlated with the final outcome ISS calculation Region Injury Square Description Top Three (ISS) Head & Neck Cerebral Contusion 9 Face No Injury Chest Flail Chest 16 Abdomen Minor Contusion of Liver Complex Rupture Spleen 25 Extremity Fractured femur External No Injury.

Results: (preliminary data) Treatment Complications Mortality: A team 37 patients ISS<13 observation, medications, O2 supply, thoracic evacuation open or closed No Complications: 0% b team 34 patients ISS 14-30 a) 28 pts (82%) operational procedure and mechanical ventilation in ICU pulmonary infection 25%, DVT 10%, 0% b) 6 pts (18%) operational procedure there was no need of ICU treatment c team 29 patients ISS>30 great operational procedure and long stay in ICU pulmonary infection 40% mortal PE 15% ISS30-50: 46%, ISS>50:100%.

Conclusions: It is obvious and we are going to strength it that ISS is a valuable index for the physician in Prehospital space to estimate the multi-injured patient and to decide the hospital of delivery the patient although the exact calculation of ISS is difficult in the Prehospital state.

PREHOSPITAL TREATMENT OF ATRIAL FIBRILLATION DURING 2001 AND 2002

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Objectives: Atrial fibrillation is the most commonly sustained arrhythmia seen in our prehospital missions. The aim of this study was to present the therapeutic strategy in the acute management of atrial fibrillation.

Methods: A retrospective analysis of 90 patients with atrial fibrillation during two years period.

Results: There were 52 men and 38 women, mean age 58 years, range 21 – 85 years. The main cause of AF was preexisting cardiac disease in 62 patients. Therapeutic intervention was performed in all episodes. Therapeutic management of atrial fibrillation started during the first 25 minutes from the onset of the episode. Amiodarone was given for conversion of atrial fibrillation in 58 cases. In 16 cases ventricular rate control was accomplished with a short-acting intravenous beta-blocker. 4 cases required electrical cardioversion. The overall conversion rate after amiodarone administration was 90%.

Conclusions: Atrial fibrillation is a common arrhythmia in prehospital emergency care and usually requires urgent management. Amiodarone is an effective and well tolerated drug for the rapid termination of atrial fibrillation.

THE SENSITIVITY AND SPECIFICITY OF A RAPID, FECAL LEUKOCYTE ESTERASE TEST FOR THE EVALUATION OF INFECTIOUS DIARRHEA

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Objectives: To determine the sensitivity and specificity of a fecal leukocyte esterase test to diagnose infectious diarrhea from bacterial or parasitic causes.

Methods: Approved by the institutional IRB prior to study initiation. Design: Prospective experimental study. Setting: Single university medical center. Subjects: Convenience sample of stool samples submitted to the clinical laboratory for enteric pathogen testing. Interventions: Stool samples submitted for standard laboratory testing and culture were further evaluated for the presence of leukocyte esterase. This was performed prior to the lab results being available and in a double-blinded fashion. Specifically, the stool specimen was probed with a dacron swab until it was saturated with fecal material. The swab was then placed in 2cc of normal saline in a small vial. The swab was vigorously agitated until the fecal material entered solution, or for at least 10 seconds. A urine multistix dipstick was then dipped into the solution and the results read as negative, 1+, 2+ or 3+, following the directions with the dipstick. Results were then compared to the final lab results, which was considered the gold standard for significant enteric infection. Sensitivity and specificity were calculated, along with 95% confidence intervals. Results: 100 stool specimens were studied, of which 100% underwent enteric cultures, 85% exam for ova and parasite and 96% underwent C. difficile toxin assay. 8 were positive by culture, 2 for parasites and 4 for C. diff toxin. The LE test detected all of these (no false negatives), but also was also positive in 75 of the 86 lab test negative samples (false positives). The test had a sensitivity of 100% (95% CI: 73-100%), but a specificity of only 12% (95% CI: 8-19%). The PPV was 15% and NPV was 100%.

Conclusions: The fecal LE has a high sensitivity, but a very low specificity for detecting bacterial infectious diarrhea. The poor specificity limits its' clinical utility.

CLINICAL EFFICACY OF DEXAMETHASONE AS ADJUVANT THERAPY FOR ACUTE EXUDATIVE PHARYNGITIS IN THE EMERGENCY DEPARTMENT

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Objective: To investigate whether the relief of symptoms in acute exudative pharyngitis are affected by treatment with single-dose dexamethasone.

Materials and Methods: A prospective, randomized, double-blinded, placebo-controlled clinical trial was undertaken in the University-based emergency department within three months period. The study included all consecutive patients between 18-65 years of age, presented with acute exudative pharyngitis, sore throat, odynophagia or combination, and has more than two of Centor criteria. Each patient was empirically treated with azithromycin and paracetamol for three days. The effects of placebo and a fixed single dose (8 mg) of intramuscular injection of dexamethasone were compared. The patients were asked to report the exact time to onset of pain relief and time to complete relief of pain. After completion of the treatment, the follow-up was conducted with telephone regarding the relief of pain.

Results: A total of 103 patients were enrolled. 30 patients with a history of recent antibiotic use, pregnant and elderly patients (>65 years) and those who failed to give informed consent were excluded. Fourty-two patients were assigned to placebo group while 31 to intramuscular dexamethasone group (8-mg single dose). Time to perceived onset of pain relief was 8.06 „b 4.86 hours in steroid-treated patients, as opposed to 19.90, b9.39 hours in control group (p=0.000). The interval required to become pain-free was 28.97„b12.00 hours in the dexamethasone group, vs. 53.74„b16.23 hours in placebo group (p=0.000). No significant difference was observed in terms of vital signs between the regimens. No side effects and no new complaints attributable to the dexamethasone and azithromycin were observed.

Conclusion: Sore throat and odynophagia in patients with acute exudative pharyngitis may respond better to the treatment with a 8-mg single dose intramuscular dexamethasone associated with antibiotic regimen than to antibiotics alone.

HAVE WE MADE A MORE ACCURATE DIAGNOSIS OF SEVERE ACUTE RESPIRATORY SYNDROME (SARS) THAN WHO CASE DEFINITION? A CASE CONTROL STUDY OF AMOY GARDEN SARS OUTBREAK IN HONG KONG

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Objectives: To compare the diagnostic accuracy of the SARS Screening Clinic in our emergency department (ED) with the WHO case definition on the largest community SARS outbreak and to assess the diagnostic role of currently available tools in ED.

Design, Setting and Patients: Case control study of all clinical SARS patients living in Amoy Garden presented to the SARS Screening Clinic in ED of the United Christian Hospital (UCH) in Hong Kong from 10/3/2003 to 10/5/2003.

Results: There were 818 patients in our study population including 205 confirmed SARS, 35 unconfirmed SARS and 578 non SARS. Sensitivity, specificity and accuracy of our SARS Screening Clinic were 91%, 96% and 94% respectively. While that of WHO case definition were 42%, 86% and 75% respectively. Fever, chills and rigors, myalgia and malaise were significant symptoms. While respiratory symptoms and gastrointestinal symptoms were not. Sore throat and abdominal pain were negatively associated with confirmed SARS. Risk of close contact and clustering effect was demonstrated. High fever, Abnormal chest X ray and drop in white cell, neutrophil, lymphocyte and platelet all were associated with significant risk. 12% confirmed SARS and 20% of unconfirmed SARS were picked up by the ED follow up system. Patients belonged to unconfirmed SARS was shown to be a heterogenous group of patients different clinically from those confirmed SARS.

Conclusion: Simple diagnostic tools and follow up system in ED were shown to be effective in screening out SARS patients in a community outbreak. Our SARS Screening was more accurate than the WHO case definition which is of poor sensitivity and only moderate specificity. Early virology confirmation is essential for accurate diagnosis. With more and better understanding of the disease, both SARS case definition and classification should be revised.

SARS AND ITS IMPACT ON EMERGENCY MEDICINE PRACTICE

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In the months of March to May 2003, Singapore experienced an outbreak of Severe Acute Respiratory Syndrome (SARS), which severely strained its healthcare system. A major public hospital was designated a SARS hospital and its emergency department (ED) was closed to all other patients except those with suspected and probable SARS. Singapore General Hospitals ED saw a sudden twofold increase in the number of patients and this almost overwhelmed the available resources in the initial stages of the outbreak. Changes had to be implemented quickly and practices had to be adapted according to the rapidly changing situation. In addition, there was a need for good infection control to prevent the spread of the deadly disease.

Measures, which were implemented at the ED to meet the challenges, could be grouped into the following: 1. Measures to protect the healthcare workers from contracting the disease. 2. Measures to identify and quickly isolate probable and suspected cases of SARS, and to decant them to the designated SARS hospital. 3. Measures to protect non-SARS patients from contracting SARS within the ED itself. 4. Mobilisation, reallocation and redistribution of available infrastructural and human resources to meet the increased workload. 5. Maintenance of staff morale and staff support programmes. 6. Timely notification of suspect and probable SARS cases so that contact tracing and quarantine measures could be implemented as soon as possible. The SARS outbreak was totally unexpected in Singapore and had many useful lessons for ED practices, especially in the light of the increasing threat of bioterrorism and biological warfare where the invisible enemy is embedded within the community, spreads rapidly and is no less deadly.

A COMPARISON OF THE PROPHYLACTIC USES OF TOPICAL MUPIROCIN AND NITROFURAZONE IN MURINE CONTAMINATED CRUSH WOUNDS

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We aimed to investigate the prophylactic efficacy against wound infection of two topical antibiotic ointments (mupirocin and nitrofurazone) in experimental contaminated crush injuries. Two 2-cm wounds were created at the backsides of 42 Wistar rats. The wound edges were crushed for 5 seconds with hemostats to simulate crush injury. Staphylococcus aureus and Streptococcus pyogenes were inoculated into the wounds. Half of the wounds were sutured and the other half left open. These wounds were treated three times daily for 6 days with topical mupirocin, nitrofurazone or petrolatum. At the end of 6 days, excisional biopsies were taken to assess infection microbiologically and histopathologically.

Mupirocin showed higher antibacterial activity in terms of bacteriological and microbiological infection against Staphylococcus aureus and Streptococcus pyogenes inoculated open and closed wounds in comparison with nitrofurazone and control groups ($p<0.001$). Nitrofurazone showed antibacterial activity against Streptococcus pyogenes only ($p<0.001$). In histopathological examination, inflammatory cell infiltration, edema, granulation tissue volume and alpha-smooth muscle actin were significantly lower in the mupirocin-treated group in comparison with the nitrofurazone and control groups ($p<0.01$ and $p<0.001$ respectively). Topical application of mupirocin and nitrofurazone three times daily were similarly effective in wounds inoculated with Streptococcus pyogenes. On the other hand, in Staphylococcus aureus-inoculated wounds, mupirocin was more effective than nitrofurazone.

ADULT SEPSIS-ASSOCIATED PURPURA FULMINANS IN THE EMERGENCY DEPARTMENT: REPORT OF TWO CASES

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Adult sepsis-associated purpura fulminans (SAPF) is a rare condition characterized by septic shock and disseminated intravascular coagulation (DIC). Death, due to multiple organ failure (MOF), occurs in about 70% of cases. Even if new therapeutic options emerge, early recognition and aggressive treatment are essential to improve survival. CASE 1: 47 year old female without significant past medical history, complained of 36 hours of unspecified malaise, fever, and diffuse muscular pain. At the Emergency Department (ED) the patient had intense pain, diffuse purpuric skin lesions, hypotension, and no nuchal rigidity. CASE 2: 17 year old female, without significant past medical history, complained of 24 hours of fever, and malaise.

At the ED the patient was unconscious, with a single purpuric lesion on her back, nuchal rigidity, and fever. Clinical and laboratory findings for GCS, WBC, PLT , PT , INR, Aptt, D-dimer, pH were: Case 1: 14,3500,26000,18%, 4.8,137,out range,7.21; Case 2: 10,4530,41000,31%, 2.7,52.2,out range,7.41. Both cases were treated in the ED with infusion of liquids, plasma, antibiotics and steroids, and then admitted to ICU. Case 1 died 18 hours after admission due to untreatable MOF. Culture examinations were not performed in the ED, and after failed to identify a cause of sepsis. Autopsy revealed: lymphocytic meningitis and encephalitis, thrombotic microvascular pathology, bilateral surrenal haemorrhage, with final diagnosis of Waterhouse-Friderichsen Syndrome (probably due to Neisseria Meningitidis). Case 2 survived. Search for soluble bacterial antigens (SSBA) performed in the ED on urine sample revealed the presence of Neisseria Meningitidis (group A,C,Y,W135). As in other experiences, we can conclude that acidosis, degree of DIC and extension of skin lesions are the most important prognostic factors in SAPF. SSBA on urine samples is safe, quick and reliable (particularly when coagulation disorders exclude lumbar puncture) and should be always performed in ED in the presence of sepsis.

NAIL POLISH: BIAS EVALUATION AND ACCURACY VALIDATION FOR THE MEASUREMENT OF OXYGEN SATURATION DETERMINED BY PULSE OXIMETRY

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Objective: Today pulse oximetry is considered standard monitoring in emergency medicine. Nail polish on fingernails can interfere with the measurement and may lead to faulty results. During emergency medical treatment correct values are essential, but nail polish can usually not be removed in the out-of-hospital setting. An exact quantification of the error of measurement is attempted in this trial.

Methods: After approval of the local ethics committee, consecutive patients of an intensive care unit with an arterial line were included. In each patient 9 of 10 fingernails were painted randomized with diferent colors of nail polish. The remaining unpainted 10th finger served as reference for the measurement. Oxygen saturation was measured on each finger via pulse oximetry (SpO_2, Sirecust SC1281, Siemens/Germany). Simultaneously an arterial blood gas sample (SaO_2, Radiometer 625, Copenhagen/Denmark) was obtained. The potential error (bias) was defined as $\Delta S=SaO_2-SpO_2$. The mean bias of each color was compared to mean SaO_2. Statistical analysis was performed with the t-test for paired values, $p<0.05$ was supposed to be significant.

Results: 50 patients (32m, 18f, 59±14 years) were included. Mean SaO_2 (97.8±1.3%) correlated well with the mean SpO_2 ($\Delta S=+0.3\pm1.6\%$, n.s.) of the unpainted finger. Black ($\Delta S=+1.5\pm3.1\%$), purple ($\Delta S=+1.0\pm2.5\%$) and dark blue nail polish ($\Delta S=+0.9\pm3.6\%$) had the greatest effect (in all $p<0.05$). All other colors (red, light green, light blue, colorless, yellow, dark green) had less effect. The smallest effect had light blue. With all colors the mean bias was less than ±2%.

Conclusion: The colors black, purple and dark blue do interfere most with pulse oximetry, but the mean error of measurement was still less than ±2%. Since this interference is not clinically relevant, it is not necessary to remove nail polish to obtain reliable SpO_2-values.

NONINVASIVE FIREGROUND ASSESSMENT OF CARBOXYHEMOGLOBIN LEVELS IN FIREFIGHTERS

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Objectives: Carboxyhemoglobin (COHb) levels can be estimated by chemical analysis of exhaled alveolar breath. Such noninvasive measurement could be used by operational EMS personnel on the fireground to screen both firefighters (FFs) and victims. The purpose of this study was to assess the feasibility of using a hand-held, battery-powered CO monitoring device to screen for CO toxicity in FFs under field conditions.

Methods: Using a hand-held breath CO detection device (CO Sniffer, Scott/Bacharach Instruments, Exton PA, USA), COHb readings were collected from FFs wearing self-contained breathing apparatus (SCBA) and performing interior fire attack and overhaul during large live-fire training exercises. Ambient CO levels were randomly measured in interior areas where the FFs were working to assess the degree of CO exposure. Data were collected by 5 EMS physicians and PAs who are cross-trained as FFs and are qualified to use SCBA for interior ambient measurements. Baseline COHb levels were obtained from all participating FF's during the informed consent process. COHb levels were obtained from personnel as they exited training evolutions and entered into a computer spreadsheet for analysis with simple descriptive statistics. IRB approval was obtained.

Results: Baseline COHb readings of 64 FF's ranged from 0% to 3% (mean 2%, median 1%). A total of 184 COHb readings were collected during 5 training exercises. The mean COHb was 2%; the median was 1%. The maximum value with SCBA was 3%; a value of 14% was measured on an instructor who removed his SCBA mask during a fire attack evolution. Each reading was also compared to the FF's baseline: the mean and median changes were both 0%. Ambient CO readings for fire attack ranged from 75 to 1290 ppm, and for overhaul from 0 to130 ppm.

Conclusions: The hand-held CO monitoring device adapted for estimation of COHb levels by exhaled breath analysis can feasibly be deployed on the fireground to assess CO exposure in FFs.

NEEDLE DECOMPRESSION OF CHEST TRAUMA PATIENTS BY MDA ALS TEAMS

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The prehospital treatment of chest trauma patient by needle decompression (ND) is controversial. Paramedics in Israel when no physician is present at the scene (50% of ALS cases) are not permitted to insert chest tubes (ministry of health regulations), and their only way to treat tension pneumothorax is by needle decompression. From October 1999 to March 2003 49847 trauma Pts were treated by MDA ALS teams. In 119 (0.24%) needle decompression was performed in the field. All the Pts had suspected tension pneumothorax, symptoms included: 35 Pts-congested neck veins, 35-subcutaneous emphysema and 3- tracheal deviation. In 61 (51%) cases a massive air leak from the needle was reported. In 58 Pts tracheal intubation was performed on scene. Twenty Pts (16.8%) died before they arrived to hospital.

Mechanism of trauma: road accident(54%), gunshot wounds (13%), stab wounds(19%), other blunt trauma (14%). Additional injuries: head and neck-41 Pts, abdomen-37 Pts and back- 6 Pts. Clinical data: In 65 Pts (54.6%) an improvement was reported after ND. In 50.8% of them the improvement was measurable (saturation, pulse or blood pressure). Chest decompression was performed with a 12-14 gauge hollow needle (venflon). Since 2001 the pleural drain for neonates (Vygon 625) was used for needle decompresion. Venflon was used for decompression in 65 Pts and Vigon 625 in 46 Pts. The improvement rate was higher in Vigon cases (63%) than in Venflon cases (49%) No needle related complications were reported by MDA ALS teams or from the ED personnel.

Conclusion: Needle chest decompression is a simple and safe procedure to be performed by paramedics who do not have the option of chest tubes insertion in the field . More than 50% of the Pts will at least temporarily improve by this procedure. Our impression is that the use of Vigon 625 neonatal pleural drain is superior to the use of Venflon for needle chest decompression.

RALLYE REJVIZ - EMS QUALITY IMPROVEMENT TOOL

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The Rallye Rejviz (RR) is an international professional exercise and competition for EMS teams. Since 1997 RR developed in an international project able not only to test the real practice of particular EMS directly in the field, but also compare particular national EMS between each other. Building on existing experience, this project aims to bring international emergency teams together in a non-threatening environment of the Jeseniky Mountains in the Czech republic to compare performances and exchange information about techniques and approaches, whilst building friendships and opportunities for cross-border cooperation.

This year (2003) 55 teams from 9 countries participated and a part of the competition has expanded from the Czech even to the Polish territory so that international EMS crews cooperated with local rescue services of 2 countries. This time experts from more than 10 countries start to work on the program for the Rallye Rejviz 2004. This event will serve not only as a competition, but also as a workshop and conference for the participants under patronage of the Czech Ministry of Health the University of Wroclaw, Czech and Polish Medical Society and Medical Institute for Postgraduate Education, Prague. RR has also its unique role as a meeting of „working class" of the EMS – people, who normally would never meet each other. The increased dialogue and cooperation will lead to improved patient care within each participant's own country as well as across its borders!

Data gained in RR could serve as a basement for next research in EM, for companies dealing with ambulance building and medical technology and also for those, who prepare standards and algorithms for EM. This information can be then used for developing or improving standards for organization, equipment, training and interventions in EMS. Important information: www.rallye-rejviz.cz

COMPARISON OF PROVIDER ACTIONS IN A TRAUMA SCENARIO INVOLVING CRUSH SYNDROME AT AN INTERNATIONAL EMS COMPETITION

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Objective: To compare the approach to a trauma scenario with crush syndrome, by different teams of EMS workers in an EMS rally competition.

Design: Prospective observational study. Setting and subjects: An international EMS competition held outdoors in the Czech Republic this past May of 2002, involving 25 ambulance teams from 7 countries including the USA. There were four teams of "paramedics", the remainder were physician accompanied teams. The scenario included 2 patients injured by a cave-in at an abandoned mine. The first patient, sitting outside and away from the entrance, had extremity fractures. The second, hidden deeper within the mine, was buried under rubble from the waist down.

Results: In the first patient, 20/25 teams started an IV, and 21/25 administered oxygen. While twenty-three splinted the arm, only 18 splinted the lower extremity and 18 gave analgesics. In the second patient most (20/25) teams recognized a shock state and/or crush syndrome, and 21/25 started IVF prior to the removal of the debris. However only 2 gave bicarb and 1 gave Mannitol. Only 12/25 placed the patient on a monitor and 19/25 administered oxygen. Analgesia was given by many (19/25), with 13 giving Fentanyl, 4 Ketamine and 3 using morphine. Many gave excessive doses or failed to adequately monitor and reassess the patient. Secondary surveys were infrequently and haphazardly performed. Other dangerous actions included the administration of insulin by one team! Another administered ascorbic acid, thiamine and folic acid. Neither the number of team members, nor the presence of a doctor seemed to make a difference in scores or patient "outcome". Of the 2 teams giving bicarb, one was a team of 2 Texas paramedics, the other a Czech team of 3 with a doctor. Physicians were more likely to administer pain meds. They were also more likely to actively direct their team often instructing them in actions that perhaps should have been automatic and routine. Surprisingly the teams from Japan and Greece, both countries with earthquakes, didn't fare well in this scenario.

Conclusion: All teams, regardless of makeup or origin, completed the scenario, indicating the feasibility of this model for comparative research, and a surprising degree of variability was observed, indicating the need for such comparative research.

WHAT ARE THE EMERGENCY DEPARTMENT OUTCOMES OF FAILED PREHOSPITAL INTUBATIONS?

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Objectives: Despite the importance of prehospital airway management, little is known about the outcomes of failed prehospital intubations. Our primary objective is to determine the emergency department (ED) outcome of failed prehospital intubations in a large emergency medical system (EMS). The secondary objective is to describe the epidemiology of all patients with an attempted field intubation.

Methods: Design: Retrospective review of the provincial prehospital intubation registry for the period of January 1, 2002 to June 1, 2003. Data for the registry were extracted from the patient care record using a standardized data extraction form. All failed prehospital intubations had their ED chart reviewed for relevant clinical information. Setting: The EMS system in Nova Scotia is a single system covering a population of 940,000 in urban, suburban and rural settings. Subjects: All intubated patients attended to by ground and air paramedics. No patients were excluded. Observations: Intubations were verified by clinical signs, and either end tidal CO2 calometry or esophageal detector devices; emergency physicians verified tube placement when possible.

Results: During the study period 973 paramedic intubations were attempted, 907 were successful. Of the 66 failed, we have ED data on 46. 22 were subsequently intubated in the ED. If in cardiac arrest (6), oral with no medication was the most common method used. If not in cardiac arrest (11) it was rapid sequence intubation (RSI). There was 1 patient who received a surgical airway and 1 a combitube. 20 patients had no ED attempt, 11 of these were declared DOA, based on down time or mechanism. Of the remaining 9, the most common disposition was DNR (3), second was respiratory distress (2). 19 of the failed prehospital intubations died, 22 were admitted to ICU (10 in transfer), 3 to a ward and 2 were discharged home.

Conclusions: The most common ED method if the patient was a cardiac arrest was oral intubation with no medication; if not in cardiac arrest, it was RSI. Of the patients who had a failed prehospital attempt the most common ED disposition was ICU admission (direct or transfer), and second was death. Overall, paramedics are adept at performing prehospital intubations, their success is influenced by their training, and a patient's clinical status.

CQI ED: A COMPUTERIZED QUALITY AND PERFORMANCE IMPROVEMENT PROGRAM FOR EMERGENCY DEPARTMENTS

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Prior to this initiative, most performance improvement data collection and analysis was done by hand each month. Graphical analysis was limited; communication of results and monitoring of improvement was less than adequate. Program's Objectives: To convert all quality audits, usually paper based, into a useful, user friendly format, to facilitate analysis and communication of results to physicians and nurses through performance feedback; to consistently produce a thorough, multi-year plan for audits; to have audit information readily available for analysis on demand; establish a tool which evaluates physician and nursing quality of care and timeliness of service; address in the program relevant aspects of risk and systems management; and benchmarking performance indicators and outcomes.

Benefits from a computerized CQI program: Increased monitoring and oversight of the delivery of high quality emergency service; timely delivery of service; physician economic profiles which provide cost-efficient care; PI based educational programs assure up to date and consistent physician practice patterns; overall staff involvement and awareness of department quality goals pertinent to the delivery of service; and ongoing risk management. Performance Measurement And Data Analysis: Performance improvement in the emergency department focused on: credentialing and the maintenance of professional requirements; Physician data feedback on performance mea-

sures of medical procedures utilization data and timeliness of service, Risk management including X-ray and EKG variances and follow-up; compliance with documentation criteria in patient care; and systems improvement. The Program CQI ED: The computerized performance improvement program is a 34 MB application which includes six modules. Results of ongoing and past studies are presented.

PHYSICIAN EXTENDERS AND LOWER ACUITY TRACKS IN THE EMERGENCY DEPARTMENT, 1995-2000: A LONGITUDINAL REPORT

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Study Objective: Widespread emergency department (ED) overcrowding and pervasive financial pressure to cut staffing costs and streamline resource utilization promote the development of alternatives to the traditional model of care in which all treatment is provided in the ED by emergency physicians, regardless of level of patient acuity. Some EDs may triage patients to separate lower acuity tracks (LATs) such as Urgent Care, and employ less costly physician extenders (PEs) such as physician assistants and nurse practitioners. The current study surveys all California emergency departments in both 1995 and 2000 regarding their use of PEs and LATs.

Methods: Surveys were mailed to all California hospitals identified as having or potentially having an ED during the calendar years of 1995 and 2000. Non-responders were contacted via telephone and/or electronic mail.

Results: The response rate was 94% [394/421] in 1995 and 79% [293/372] in 2000, with 267 EDs providing complete data for both periods. No significant differences were found between aggregate and longitudinal responses. Among the 267 EDs providing longitudinal data, overall PE use increased 9%, from 31% [83] in 1995 to 40% [108] in 2000, reflecting new PE utilization by 16% [43] of EDs and discontinuation of PE services in 7% [18]. Overall use of LATs increased 8%, from 39% [105] in 1995 to 47% [127] in 2000, representing LAT openings in 21% [56] of EDs and closures in 13% [34].

Conclusions: The net use of lower acuity tracks and physician extenders grew 8% and 9% respectively from 1995-2000, likely reflecting an ongoing effort to reduce costs and shift resource utilization within emergency care, however interestingly, some facilities discontinued the use of these alternatives during the study period, as well.

OBSERVATION MEDICINE, AN ED LIFE VEST

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Introduction: Observation medicine goes back to the times of the Pharaoh. The dilemma of what's next can be made easier with a new dimension of the ED by adding observation units. Observation units are part of modern EDs, our example shows how that can be true.

Objectives: Show our unique experience outside North America. Avail our tools for your own use and share with our colleagues a unique experience of how predetermined clinical conditions can help emergency medicine practice. Will share with our colleagues how we selected, and developed our own clinical pathways with statistical analysis of our results. Problems faced in EDs to justify EDOUs: 1. Overcrowded EDs 2. Improper disposition, and confused decision process 3. Customer satisfaction 4. Malpractice risks 5. Full hospital beds > increased waiting times 6. Cost reduction 7. Fertile soil for research 8. An opportunity to practice evidence-based, cost effective medicine with follow up available in the ED.

DEVELOPING EMERGENCY NURSE PRACTITIONER SERVICE IN THE UK

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Objective: This paper looks at how the Emergency Nurse Practitioner Service can be developed in a large District General Hospital and to look at the cost and effectiveness of this service, as well as to see if any changes were required for further development of this service.

Method: The training and academic achievements of the Nurse Practitioners employed at City Hospital were looked at. The medical records of all patients seen by Emergency Nurse Practitioners were studied by a Consultant in the department. A regular audit of working hours, number of patients and type of patients seen was carried out. The waiting times of the patients were also recorded. The training sessions carried out by the Consultants were also analysed.

Results: Six Emergency Nurse Practitioners were trained in the last one year. One completed a BSc in Clinical Nursing Studies; one is in 2nd year of BSC Hons. Healthcare Practitioner Degree; two are completing ENB A33 (Autonomous Practitioner) at University of Sheffield. Two others are Senior Nurses who have extended their role by training in the department. The Nurse Practitioners saw 7% of the total number of patients seen in A&E (6,000 patients) at a cost of £

Conclusions: Developing a Nurse Practitioner Service is expensive to start with. Extensive training and Consultant time is required, but once established it becomes a cost effective service in moving the patients effectively within 4 hours from the department.

EMERGENCY NURSE PRACTITIONERS. A VIABLE OPTION?

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Emergency Nurse Practitioner services have been developing across the country, mainly to achieve the 4 hour waiting time target and also to expand the role of Nurse Practitioners.

Objective: To assess the cost and effectiveness of Emergency Nurse Practitioners at City Hospital, Birmingham. Method: Data was collected to analyse the number of patients, type of patients and treatment carried out by Nurse Practitioners in one year. It was compared with the similar data collected for the Senior House Officers (SHO) in the department. The department saw 87,000 new patients between March 2002 and March 2003.

Results: Emergency Nurse Practitioners saw nearly 7% of total attendances in the Accident & Emergency Department (A&E) at a cost of nearly £5.38 per patient. An SHO, on average, in the same period of time saw 1.46 patients per hour at a cost of £13.71 per patient. The only difference between the two were the type of patients seen, Nurse Practitioners seeing only

category IV and V patients according to Manchester Triage system, while SHOs saw category I, II and III patients (more serious patients). All patients seen by Nurse Practitioners were discharged within 4 hours from the department.

Conclusions: Nurse Practitioners are an effective way of complimenting SHOs in a busy A&E department. They aid the flow of patients and allow the department to work more efficiently and effectively. They are helpful in achieving 4 hours waiting times for the patients in the A&E.

HOSPITAL CAPACITY INFLUENCES SATISFACTION OF AMBULATORY ED PATIENTS

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Patient satisfaction is an important element in the quality perception of (emergency) medical care. Improving satisfaction means improving quality of care. Institutions become more and more aware of the fact that a good medical outcome alone is no longer the exclusive parameter for quality of care. Emergency departments are confronted with this pressure by satisfaction polls and the consequent relevant question about how they will improve their performance.

Purpose: To show that incapability to admit patients from the ED into the hospital, also influences the satisfaction of ambulatory ED patients. Materials and Methods: A satisfaction poll concerning the treatment in the ED was organised by the hospital's management in 2002 from March 1 until November 30. During this period, the length of stay (LOS) for ambulatory and hospitalised patients at the ED was automatically recorded by our information system. Correlations were calculated using the Pearson's correlation coefficient. Results: 21.933 patients were treated in the ED during the study period. 4.544 of them were invited at random to answer the questionnaire. Response rate was 29%. Results were presented per month. The mean dissatisfaction rate was 1,4% (0 – 3,3%). The mean LOS per month in the ED for hospitalised patients varied from 4h35 till 7h23 and for ambulatory patients from 1h38 till 3h19. Pearson's correlation coefficient between LOS for hospitalised and ambulatory patients was 0,68. Between LOS for ambulatory patients and dissatisfaction rate, Pearson's correlation coefficient was 0,80.

Conclusion: Dissatisfaction in the ED highly correlates with the length of stay for ambulatory patients. The length of stay for these patients is significantly related to the flow possibilities for those ED patients who have to be hospitalised. Outflow improvement should be a major concern for the hospital's management.

PREDICTION OF MORTALITY IN THE OBSERVATION UNIT OF THE EMERGENCY DEPARTMENT: COMPARISON OF TWO SCORING SYSTEMS

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The observation units (OU) of the emergency department (ED) are used to provide short term services for up to 24 hours. In overcrowded hospitals, these are also used as holding units where admitted patients are kept till they are transferred to the inpatient beds of the hospital. Prognostication in the OUs is useful for explaining the prognosis to the patients (or their family members) and also helps in triaging as well as appropriate utilization of limited hospital resources. Prognostication based on clinical assessment is affected by various factors such as the physician's limited experience and false beliefs. Hence scientifically developed objective methods are required to assess the prognosis. The intensive care unit (ICU) physicians use various scoring systems such as APACHE, logistic organ dysfunction (LOD) score and organ system failure (OSF) score for prediction of outcome. We have used LOD and OSF scores to predict outcome of the patients admitted from the emergency department. Objective: To compare the LOD and OSF scores to see which one predicts mortality better in patients admitted in the observation unit of the emergency department.

Material and Methods: This was a prospective study of 160 patients who spent at least 24 hours in the OU of the ED of a tertiary care centre. Both scorings systems (LOD and OSF) were applied to all the patients on the day of admission. These patients were followed up after transferring to the inpatient beds of other departments and the final outcome (death or survival) was noted. C statistic, or area under the Receiver Operating Characteristic (ROC) curve, is a convenient way of summarising sensitivity and specificity of these scoring systems. The scoring system which has more area under the ROC curve is a better predictor of mortality.

Results: Mortality rate observed was 35%. C statistic (or ROC curve areas) for the OSF and the LOD scores were 0.83 [SE 0.27] and 0.76 [SE 0.26] respectively. The difference in the areas under the two curves was statistically significant ($p<0.05$). This shows that the OSF score predicts mortality better than the LOD score. Most of the newer scoring systems which are used in the ICUs have ROC areas of 0.8 to 0.9.

Conclusion: Both the LOD and the OSF scores are simple and can be used for predicting mortality in the OU of the ED. The OSF score is a better predictor of mortality.

OTTAWA ANKLE RULES – CAN WE SPEND LESS MONEY BY USING CLINICAL ALGORITHM?

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Objective: To assess the feasibility and economic impact of introducing the Ottawa ankle rules to an Emergency Department. Design: Prospective clinical study. Setting: Emergency Department of Clinical Hospital Center in Rijeka, Croatia. Subjects: 407 cases where the indication for radiogram was based on traditional clinical examination (Group A) during the three-month period before the introduction of the Ottawa ankle rules into the Emergency Department practice, and 393 cases where the radiogram was indicated according to Ottawa ankle rules algorithm (Group B) during the three months after its introduction. Intervention: Five physicians were taught to order radiography according to the Ottawa ankle rules. Main outcome measures: Referral for ankle and foot radiography.

Results: The radiogram was indicated in 97.4% of cases in Group A and in 73.3% cases in Group B. The difference is

statistically significant (÷2=78.93, p<104). Bone fracture was diagnosed in 31.5% of cases in Group A and in 27.2% of cases in Group B, and the difference was of no statistical significance. Expected annual saving on radiogram costs in the Emergency Department achieved with application of "Ottawa ankle rules" would be as much as 7572 Euros.

Conclusions: Introduction of the Ottawa ankle rules led to a decrease in ankle radiography, waiting times, and costs without an increased rate of missed fractures.

RAPID EMERGENCY MEDICINE SCORE: A NEW PROGNOSTIC TOOL PREDICTS IN-HOSPITAL MORTALITY IN THE NON-SURGICAL ED

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Objective: To evaluate the predictive accurcy of the scoring system Rapid Acute Physiology score (RAPS) in non-surgical patients attending the Emergency Department (ED) regarding in-hospital mortality and length of stay in hospital (LOS), and to investigate whether the predictive ability of RAPS could be improved by extending the system.

Design: Prospective cohort study Setting: An adult ED of a 1200-bed university hospital Patients: 12006 non-surgical patients presenting to the ED during 12 consecutive months. Methods: For all entries to the ED, RAPS (including blood pressure, respiratory rate, pulse rate and Glasgow coma scale) was calculated. The RAPS system was extended by including the peripheral oxygen saturation and patient age (Rapid Emergency Medicine Score, REMS) and this new score was calculated for each patient. The statistical associations between the two scoring systems and in-hospital mortality as well as LOS in hospital were examined.

Results: REMS was superior to RAPS in predicting in-hospital mortality (area under ROC-curve 0.852±0.008 for REMS compared to 0.652±0.019 for RAPS, p<0.05). An increase of one point in the 26 point REMS scale was associated with an OR of 1.40 for in-hospital death (95% CI 1.36-1.45, p<0.0001). Similar results were obtained in the major patient groups (chest pain, stroke, coma, dyspnea and diabetes). The association between REMS and LOS was modest. (r=0.47, p=0.0001).

Conclusion: REMS was a powerful predictor of in-hospital mortality in patients attending the Emergency department over a wide range of common non-surgical disorders.

EFFECT OF SEASON, AGE AND GENDER ON INCIDENCE OF EMERGENCY DEPARTMENT RENAL COLIC VISITS

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Objective: A previous study in Saudi Arabia demonstrated that emergency department (ED) renal colic visits had a seasonal variation, with the highest incidence in June, July and August. We wished to see whether a similar seasonal pattern would also be found in New Jersey using a much larger database. Methods: Design: Retrospective analysis of a computerized billing database of ED visits.

Setting: Fifteen urban and suburban New Jersey hospital EDs with annual volumes of 20,000 to 70,000. Participants: Consecutive patients seen by ED physicians from 1-1-1996 to 12-31-2002. We analyzed the number of renal colic visits as a fraction of total visits in monthly intervals. We used the Chi-squared test and Pearson's correlation coefficient, with p<0.05 taken as statistically significant.

Results: There were a total of 3.5 million patient visits in the database, of which 30,358 (0.9%) had a diagnosis of renal colic. Renal colic visits were 16% more likely in the warmer months of June, July and August compared to the colder months of December, January and February (p<0.0001), and this effect was greatest in older patients and males. For males in the oldest age quartile, renal colic visits were 41% more likely in the warmer compared to colder months. Renal colic visit rates correlated positively with mean monthly ambient temperatures (R=0.42, p<0.001).

Conclusion: In New Jersey, higher ambient temperature, older age and male gender are associated with increased incidence of ED renal colic visits. Advice to patients, especially older males, to avoid dehydration particularly during hot weather may help prevent bouts of renal colic.

POINT OF CARE BLOOD KETONE TESTING OF DIABETIC PATIENTS IN THE EMERGENCY DEPARTMENT

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Objective: The purpose of our study was to determine the utility of point-of-care blood ketone testing in diabetic patients presenting to the emergency department with any non-trauma related complaint.

Methods: In this prospective, observational clinical study, patients with known diabetes mellitus presenting to our tertiary care university emergency department with any non-trauma related medical complaint and an elevated fingerstick glucose (=200 mg/dL) were eligible for inclusion. Capillary blood β-hydroxybutyrate level, venous blood ?-hydroxybutyrate level, venous blood glucose level, arterial blood gas analysis and urine ketone dipstick were measured in each patient as primary outcome measures.

Results: Total 139 of 479 diabetic patients with high capillary blood glucose level (=200 mg/dL) and a positive capillary blood β-hydroxybutyrate (=0.1 mmol/L) were included in the study. Hyperketonemia (=0.42 mmol/L) was found in 48 of these patients by Sigma Diagnostics reference testing (diabetic ketosis in 35%). The calculated blood pH was less than 7.3 in 18 of these 48 patients (ketoacidosis in 31%). Capillary and venous blood β-hydroxybutyrate levels were not statistically different from each other (p=0.824). There was a positive correlation between capillary and venous blood ?-hydroxybutyrate levels (r=0.488, p=0.000). The sensitivity and specificity of urine ketone dip testing and capillary blood ketone testing in determining diabetic ketoacidosis were 73% and 78%, and 80% and 82%; and in determining hyperketonemia (both in diabetic ketosis and diabetic ketoacidosis) were 82% and 54%, and 91% and 56%, respectively.

Conclusions: A rapid bedside capillary blood ketone test for β-hydroxybutyrate can accurately measure blood concentrations of β-hydroxybutyrate in diabetic patients in an emergency department setting. This device can be used as a reliable diagnostic test to detect emergency metabolic problems in diabetic patients, such as diabetic ketosis or ketoacidosis.

PRIMARY RESULTS OF THE RAPID EMERGENCY DEPARTMENT HEART FAILURE OUTPATIENT TRIAL (REDHOT): A MULTI-CENTER TRIAL EXAMINING BNP LEVELS, EMERGENCY PHYSICIAN DECISION MAKING AND OUTCOMES IN PATIENTS PRESENTING WITH SHORTNESS OF BREATH

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Background: The vast majority of patients seen in the Emergency Department (ED) with CHF are admitted to the hospital, leading to exorbitant costs and resource utilization. There are few tools that aid physicians in decision making with regard to ED treatment followed by discharge versus immediate or delayed hospitalization. Hypothesis: BNP correlates with the presence of CHF, disease severity, and prognosis. This is the first large cohort that examines BNP in relation to physician decision making, patient disposition, and critical outcomes in emergency medicine.

Methods: The REDHOT study was a 10 center trial in which patients seen in the ED with shortness of breath were consented to have BNP levels drawn on arrival, every 3 hours in the ED as well as at time of admission or discharge. Physicians were only told whether the initial BNP level was greater or less than 100 pg/ml, and blinded to subsequent BNP levels. Patients were followed up for 90 days after discharge.

Results: Of the 504 patients consented, 90% were hospitalized, even though only 68% were designated for hospitalization upon initial evaluation. Sixty four percent of patients who were admitted with a NYHA classification of III or IV had BNP levels < 200 pg/ml (13% of total population). This group had a 90-day mortality of only 1.7%. Thirty-six patients were discharged from the ED with a BNP level > 400 pg/ml. The 90 days mortality was 10% in this group, while patients discharged from the ED with a BNP level < 400 pg/ml had 0% mortality at 90 days. Patients who were discharged home from the ED actually had higher BNP levels than those admitted (although the difference was not statistically significant (976 versus 766, p=0.06). Using regression analysis, ED doctor's intention to admit or discharge a patient had no influence on their 90 day mortality, while the BNP level was a strong predictor of 90 day mortality.

Conclusion: In patients presenting to the ED with heart failure, there is a strong disconnect between the perceived severity of CHF by ED physicians and severity as determined by BNP levels. The results of this study strongly suggests that BNP levels will aid physicians in making appropriate triage decisions about whether to admit or discharge patients. This should avoid prolonged stays in the ED, unnecessary hospitalizations, inappropriate discharges home and overall lead to better patient care.

THE ROLE OF THE PATIENT-CONTROLLED ANALGESIA (PCA) APPARATUS FOR SEDATION IN THE EMERGENCY UNIT

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Hand trauma is one of the most common causes of emergency unit admissions. Various analgesic and sedative agents are used to decrease pain and anxiety during minor surgical procedures for these patients and provide more comfortable conditions for the surgeon. The aim of this study was to investigate the potential role of the patient-controlled analgesia (PCA) apparatus during surgical procedures under local anesthesia for hand trauma in the emergency unit.

Methods: Forty ASA I-II patients who attended the emergency unit for hand trauma were randomized to 2 groups of 20 patients. The control group received 1 µg/kg fentanyl (i.v.) and 0.028 mg/kg midazolam (i.v.) .Additional 1 mg doses of midazolam were given by the anesthesiologist to keep the sedation level between 3 and 4. In the PCA group, the midazolam was administered after programming of the apparatus. The settings were as follows: loading dose: 0.028 mg/kg, bolus dose 1 mg, lock out period: 5 min and basal infusion rate: 0. The loading dose was given before local anesthesia. All patients received prilocain hydrochloride (Citanest 2%, 10 mL) for local anesthesia. The systolic blood pressure (SBP), diastolic blood pressure (DBP), heart rate(HR), SpO2 and respiration rate (RR) were measured before intervention and at 2,3,5,10,15,20 and 30 minutes. The Modified Observer's Assessment of Alertness/Sedation Scale (OAAS) was used for sedation assessment.

Results: There were no differences between the demographic characteristics, operation and discharge times of the two groups ($p>0.05$) (Table 1). Cardiovascular or respiratory instability was not observed in any patient and SpO2 remained over 95%. The SBP, DBP, HR and SpO2 did not show significant differences ($p>0.05$) (Table 2). Although the sedation levels were satisfactory, the sedation levels of the control group were significantly lower at 5 and 15 minutes ($p<0.05$). The total midazolam dose was 4.3 ± 1.1 in the control group and 4.0 ± 0.8 in the PCA group. Patient satisfaction rate was 95% in the PCA group and 80% in the control group.

Conclusions: Although the two regimens did not differ with respect to hemodynamic changes and sedation levels, PCA with the higher rate of patient satisfaction may be an alternative for surgical procedures under local anesthesia.

ED USE OF ZIPRASIDONE: A SAFER ALTERNATIVE TO IM DROPERIDOL?

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Background: The acutely agitated patient is a common challenge for the ED physician. Recent concerns regarding QTc prolongation in such patients treated with droperidol have prompted a search for alternative agents. Ziprasidone (ZIP) is a new, rapidly acting agent chemically unrelated to phenothiazine or butyrophenone antipsychotics with less QT prolongation. We attempted to determine if ZIP is an effective alternative agent for the ED treatment of agitation.

Methods: This was a prospective, open-label clinical case series of patients seen in a community hospital. Patients exhibiting agitation with an abbreviated Brief Psychiatric Rating Scale (BPRS) of greater than 9 were entered into the study. Patients received 20mg of IM ZIP at times 0, 45, and 90 minutes. Both patients and physicians rated agitation on a 10cm visual analog scale (VAS). Physicians also rated patient anxiety, hostility, and uncooperativeness on the 7-point BPRS at 15-minute intervals for 90 minutes. Comparisons were by repeated measures ANOVA with Tukey's post-hoc procedure.

Results: Twenty patients were enrolled. Mean patient self-assessed VAS scores were 46.9 +/-15.8 at baseline, decreasing to 38.9 +/-11.7 at 45 minutes and 19.3 +/-8.3 at 90 minutes (p=0.04). Physician-rated VAS scores also decreased from 79.4 +/-4.8 to 32.4 +/-6.6 to 17.7 +/-3.9, respectively (p=0.001). Mean BPRS for anxiety decreased from 5.4 +/-0.5 at baseline to 1.4 +/-0.2 at ED discharge (p=0.001); mean BPRS for uncooperativeness and hostility decreased similarly (p=0.001). A repeated measures ANOVA was significant for all 3 BPRS symptom constructs at F=33.8, 32.8 and 34.9 (p=0.001) respectively.

Conclusion: IM ziprasidone is an effective and well-tolerated alternative for agitated ED patients in institutions where concerns regarding droperidol toxicity and monitoring limit its use.

EMERGENCY DEPARTMENT ASSESSMENT OF ANXIETY AND DEPRESSION

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Objectives: We determined the extent to which ED physicians and nurses assess levels of anxiety and depression in patients with physical symptoms. We hypothesized that patients' self-reports of anxiety and depression would correlate more highly with diagnostic criteria than either physician's or nurse's assessments.

Methods: We performed a prospective observational study on a convenience sample of patients in a large suburban ED. We administered and scored two previously validated self-report measures of anxiety and depression, the State Trait Personality Inventory (STPI) and the Brief Patient Health Questionnaire (PHQ) of the Primary Care Evaluation of Mental Disorders (PRIME-MD). Physician and nurse numerical ratings of patients' anxiety and depression were obtained based on operational definitions. The main outcome measures were the degree of correlation between STPI and PHQ scores and between PHQ scores and the ratings assigned by ED physicians and nurses.

Results: A total of 222 (5.4%) of all patients were approached; 207 agreed to participate, and 193 completed the study. The correlation between the patients' scores on PHQ and STPI for anxiety (.427) and depression (.685) was significantly greater than the correlation between the scores on PHQ and either the ED physicians' ratings of anxiety (.178) and depression (.223) or the nurses' ratings of anxiety (.085) and depression (.149).

Conclusions: Self-report measures of anxiety and depression correlated more highly with diagnostic criteria than either physicians' or nurses' subjective ratings. These findings suggest that self-report questionnaires could be useful in the assessment and management of emotional states in the ED.

RECENT PSYCHOPHYSICAL IMPAIRMENT IN THE ELDERLY: AN ATYPICAL PRESENTATION OF POTENTIALLY SEVERE MEDICAL EMERGENCIES

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Recent loss of autonomy and mental impairment, without other symptoms, can be an atypical presentation of illness in the elderly. AIMS. To consider the presence of recent physical and psychical impairment (RPPI) as a potentially severe medical emergency even if there is not a conclusive diagnosis.

Methods: Elderly patients over 65 years of age who consulted for RPPI were prospectively studied. RPPI was defined as functional loss (loss of independence in 2 or more daily living activities) combined with psychical impairment (Confusion Assessment Method criteria), that have appeared in the last 15 days. Patients with an evident cause of impairment were excluded.

Results: 15 patients, 4 men (26.6%) and 11 women (73.3%) with a mean age of 82.2 years, were studied. Prior to admission, only 3 patients were dependent for daily living activities and only 2 patients had cognitive impairment. None of them had recent intake of psychotropic drugs. Physical examination, blood analysis, direct microscopic urine observation, ECG, chest Rx and brain CT did not show any data that justified the patients' clinical situation. Emergency diagnostic orientation was: non filiated delirium (13), virosis (4), cognitive impairment (3), hypertension (2), stroke (1), anemia (1) and atrial fibrillation (1). 6 patients (40%) had been diagnosed of sociopathy and the appropriateness of the admission was questioned. All patients were admitted. Definitive diagnosis at discharge were: stroke (3), hypothyroidism (2), neurolues (1), bacterial meningitis (1), digital intoxication (1), sinus node illness (1), high gastrointestinal bleeding (1), phenytoin deprivation seizure (1), non filiated delirium (1) and death without diagnosis (2). Only 3 (20%) patients could be home discharged, 9 (60%) were transferred to nursing homes and 3 (20%) dead (2 without diagnosis and 1 due to complications during admission).

Conclusions: RPPI is a syndrome of difficult diagnosis that can be due to severe medical illness. Misdiagnosis of this syndrome and its potential severity can result in a minimisation of symptoms and overvaluation of social problems that can lead to inappropriate discharges.

A RANDOMIZED PROSPECTIVE PLACEBO CONTROLLED STUDY OF INTRAVENOUS MAGNESIUM SULFATE VERSUS METOCLOPRAMIDE IN THE MANAGEMENT OF ACUTE MIGRAINE ATTACKS IN THE EMERGENCY DEPARTMENT

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Study objective: The objective of this study was to determine the effectiveness of intravenous magnesium sulfate and intravenous metoclopramide in the treatment of acute migraine attacks in the emergency department, when compared to placebo.

Methods: In this randomized, placebo controlled, double-blinded study, adults who presented to the emergency department with a headache that met International Headache Society (IHS) criteria for acute migraine, were infused with either 10 mg of intravenous metoclopramide, 2 g of intravenous magnesium sulfate or normal saline over 10 minutes. At 0, 15, and 30 minutes, patients were asked to rate their pain on a standard visual analog scale. At 30 minutes, patients were asked in a standard manner about the need for rescue medication. Adverse affects were also recorded. Patients were followed-up by telephone within 24 hours for recurrence after discharge. The primary end point of the study was the difference in pain relief between the groups at 30 minutes.

Results: Of 120 patients who met IHS criteria, 7 were excluded from the study due to insufficient data. Baseline datas were comparable between groups. Each group experienced more than a 25-mm improvement in VAS score from 0 to 30 minutes. However, there was no significant difference (p=.278) detected in the median changes in VAS scores for pain. At 30 minutes, 14 (38%) of 37 patients in the metoclopramide group and 16 (44%) of 36 patients in the magnesium group needed rescue medication compared with 26 (65%) of 40 patients in the placebo group (p=0.044). The recurrence rate in 24 hours was 43%, 52% and 52% for metoclopramide, magnesium and placebo, respectively (p=.645).

Conclusion: Although patients receiving placebo required rescue medication more than the others, metoclopramide and magnesium have an analgesic power only as much as placebo in migraine attack.

COMPARISON OF INTRAVENEOUS DIAZEPAM, DIPHENHYDRAMINE AND DIMENHYDRINATE ON PATIENTS WITH VERTIGO IN THE EMERGENCY DEPARTMENT

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Objective: There are limited studies on frequently used drugs for vertigo treatment in the emergency department setting. The aim of this study is to compare treatment and side effects of intraveneous (IV) diazepam, diphenhydramine and dimenhydrinate on patients with vertigo.

Method: This was a prospective, double-blind, randomized clinical study. The study was conducted at a university hospital emergency department for a three month period between April 1 and June 30, 2001. Patients who presented with vertigo as a chief complaint, and were more than 17 years of age were included. Adequacy of randomization of treatment groups was assessed by comparing the patients' relevant baseline history, symptoms, and physical examination. 2 mg diazepam, 50 mg diphenhydramine, or 50 mg dimenhydrinate were administered by IV route over 2 min. Patients evaluated their vertigo perception with Likert numeric (1 – 10) scale during walking, standing, sitting, and supine positions at zero, 30, 60 minutes, and just before disposition. Patients also evaluated side effects at the same periods. Patients were asked if they needed an additional drug for vertigo. Pearson chi-square, Kruskal-Wallis and Mann-Whitney tests were used for statistical analysis.

Results: 74 patients were enrolled as the study population. All three drugs were found equally effective to decrease vertigo. There was no statistical difference between groups in regards to needing an additional drug for vertigo (p>0.05). There was no statistical difference between groups for side effects, except for sedation. Diphenhydramine and dimenhydrinate caused more sedation than diazepam (p<0.05).

Conclusion: Diazepam, diphenhydramine and dimenhydrinate are equally effective to treat vertigo in the emergency department. Diazepam has less sedation and equal treatment effect on vertigo at the dose we used.

THROMBOLYSIS IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION AND LEFT BUNDLE BRANCH BLOCK; RECONCILING CONFLICTING APPROACHES AND SIMPLIFYING TREATMENT DECISIONS

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Introduction: Left bundle branch block (LBBB), whilst an ECG feature suggestive of acute MI (when new) and thus an indication for thrombolytic therapy continues to cause difficulties for junior staff when deciding to thrombolyse a patient. Protocols for the management of such patients range from thrombolysis of all patients, thrombolysis of none of them or thrombolysis of some of them based on certain validated ECG criteria. An algorithm has been published based on these criteria with the intention of simplifying the analysis of acute MI in the presence of LBBB and thus to assist in thrombolysis decisions. Following an audit of the thrombolysis carried out in our department we found that over a 6-month period no patients with symptoms of acute MI amd LBBB received thrombolytic therapy. This was due to perceived difficulties in using the current algorithm. We undertook to design a simple guide to improve interpretation of ECG's showing LBBB and compared its reliability to the current algorithm.

Methods: 20 ECG's demonstrating LBBB, 10 of which were taken from patients subsequently demonstrated to have had an acute MI (based on enzyme analysis) were presented to junior and middle grade doctors in the department. Half the doctors were given the current algorithm to aid their interpretation and the other half the redesigned proforma. Two weeks later the exercise was repeated with each group using the alternative method.

Results: Using the current algorithm as a test demonstrated it to have a sensitivity of 0.38. With the new proforma sensitivity rose to 0.6. Specificity for myocardial infarction rose from 0.85 to 0.96. This gave a positive likelihood ration of 15 with the new proforma as compared with 2.5 with the old, and a negative likelihood ratio of 0.41 compared with 0.73. Analysis of inter-observer variation using kappa methodology demonstrated that levels of agreement rose from poor to good.

Conclusion: Patients with acute MI and LBBB have been shown to have a significantly poorer outcome than those without LBBB, despite this thrombolysis is less likely to be given to patients with MI and LBBB. This study demonstrates that in part this is due to cognitive difficulties using the current algorithm. The proposed proforma addresses these issues and provides a simple tool to aid appropriate treatment in this group of patients.

THE EFFECTS OF TEMPERATURE VARIATION ON ACUTE MI FREQUENCY IN THE ELDERLY

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Objective: There are restricted data about effects of temperature and seasonal variations on acute myocardial infarction (AMI) in the elder patients. The aim of the study is to evaluation of the effect of temperature variability on AMI in the elderly in our city that has high range of temperature differences between seasons.

Methods: Patients who are 60 years of age and older and presented with AMI to three major emergency departments (ED) of the city between January 1998 and December 2000 were enrolled in the study. Patient records were retrospectively reviewed for presenting date, month, age, gender, and outcome. Daily temperature records were taken from Regional Weather and Meteorology Center. Student – t, Pearson Chi-square, ANOVA, and Logistic regression analyses were used for statistics.

Results: 79,123 elder patients were presented to the EDs during the study period. AMI was diagnosed in 1.56% (1,232) of patients. Frequency of AMI in male group was higher than female ($p<0.001$). AMI diagnosis of male group was found higher in April and November ($p=0.027$). There were suddenly 8.1 degrees C increasing and 5.4 degrees C decreasing trends on mean temperature in April and November, respectively. Statistically significant independent predictors of deathly AMI in our study were male gender (odds ratio [OR] 2.13, $p=0.04$), AMI presented in September-October period (OR 3.43, $p=0.01$), mean daily temperature between + 1 and 15 degrees C (OR 3.21, $p=0.008$), and between – 22 and 0 (OR 5.21, $p=0.02$).

Conclusion: AMI was more frequent in male elder patients. In addition, male elder patients have more risk that shows deathly AMI presentations than female. Frequency of deathly AMI increases as the temperature decreases, especially below 15 degrees C. Beside of seasonal variability, sudden increase and decrease in temperature can be an important factor for AMI in the elderly. Independent predictors that we found in our study should be evaluated with prospective studies.

IMPACT OF PRE-HOSPITAL CARE IN PATIENTS WITH ACUTE MYOCARDIAL INFARCTION (AMI) IN A FRENCH GENERAL HOSPITAL

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Introduction: Prompt delivery of high quality coronary care improve outcome in patients with AMI. The aim of our study was to compare prospectively the real impact and efficacy of a pre-hospital fibrinolytic therapy initiated by the french original pre-hospital care system, MICU (SMUR and SAMU), with therapy first started in-hospital.

Methods: A registry of patients with AMI was started, in a close collaboration between Cardiologic Intensive Care Unit and Emergency and Pre-hospital Care Unit of our hospital. All consecutive patients with AMI occuring within 24 hours between 01/01/2000 and 15/04/2003 were studied. The collected datas were : age, sex, delays from onset of symptoms (OS) to first medical care (FMC) and to fibrinolytic therapy (FT), topography of AMI, type of management and in-hospital mortality.

Results: 504 patients, mean age 68 + 10 years, range 26 to 96 years, men 68%, were collected. 367 (73%) had AMI with ST elevation, potentially suitable for fibrinolytic therapy. 174 (47%) were managed pre-hospital with 96 (55%) fibrinolysis, 18 (10%) and 78 (45%) in-hospital and pre hospital fibrinolysis respectively. 193 (53%) were managed directly in-hospital with 52 (27%) fibrinolysis. Pre-hospital patients vs In-hospital managed patients had a significant reduction in mean delay times from OS to FMC,172 vs 369 min, respectively, and from FMC to FT, 45 vs 27min respectively. In-hospital mortality was significantly lower in the pre-hospital group 5% vs 7% in the in-hospital group. For patients younger than 70 years: most important significant difference were found, with lower mean delay times from OS to FMC,158 vs 372min. In-hospital mortality was significantly lower (1.6% vs 3.4% respectively) and in Hospital mortality was greatly reduced in pre-hospital fibrinolysed patients 0% vs 2.4%.

Conclusions: We confirm the efficacy and superiority of pre-hospital fibrinolytic therapy initiated by MICU, to therapy first started in-hospital.

MYOCARDIAL INFARCTION REDEFINED: IMPACT ON CASELOAD AND OUTCOME OF PATIENTS ADMITTED WITH ACUTE CORONARY SYNDROME WITHOUT ST-SEGMENT ELEVATION IN A LARGE COMMUNITY-BASED HOSPITAL IN FLORENCE

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To assess diagnostic frequency of redefined AMI (r-AMI), and outcome in pts with acute coronary syndromes without ST-segment elevation (NSTEACS), 399 consecutive pts (mean age 63 y, 27% female, 2001-02 y) with serial ECG, echocardiography, CKMB-mass, and cTnI performed at 0h, 6h,12h, 24h from admission. Decisional levels of AMI were: CKMB greater than 7.2 ng/mL, cTnI greater than 0.10 ng/mL. 2 groups were considered: pts with elevated cTnI and CKMB (A: traditional criteria, t-AMI), and pts with elevated cTnI alone (B: r-AMI). End points were coronary events (CE) (angina, non-fatal AMI and death), and need of revascularisation (PCI), during in-hospital stay and at 3-month follow-up. Of the 399 pts, 151(38%) encountered group-A criteria (t-AMI), and 73(18%) group-B criteria (r-AMI); 175(44%) had a final diagnosis of unstable angina (UA). The new troponin-based criteria increased by 47% the diagnosis of AMI as compared to t-AMI.

Among group-A pts, 22 (15%) had CE and 3 (2%) died during in-hospital stay; in addition, 36 (24%) had CE and 12 (8%) died at 3 months. Conversely, among group-B pts, 6 (8%) showed CE and mortality was 0%, during in-hospital stay; moreover, 15 (21%) had CE and 4 (5%) died at 3 months.

Thus, CE of t-AMI were significantly higher (sh) as compared to r-AMI, both during in-hospital stay and at 3 months; mortality was (sh) in group A at 3 months (t-AMI vs r-AMI during in-hospital stay: CE 22 vs 6, P=<.001, mortality 3 vs 0, P=n.s.; and at 3 months: CE 36 vs 15, P<.0001, mortality 12 vs 4, P=.04). PCI was performed in 34(23%) of group A, and in 18 (25%)of group B.

In a cohort of pts with NSTEACS the incidence of r-AMI, increased by 47% the diagnosis of AMI. R-AMI showed a significantly lower occurrence of short-term as compared to t-AMI. The socio-economic impact of increased AMI based on the new cTn-criteria has been stressed, but allocation of resources should be considered in view to the different outcome between subgroups.

A CASE OF UNUSUAL PAEDIATRIC CARDIAC ARREST

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The authors present a clinical case of an unusual presentation of pediatric cardiac arrest. The Pre Hospital Emergency Medical Team (PHEMT) was called to assist an unconscious 8 year old girl. When they arrived, the girl's parents were performing B.L.S. The PHEMT confirmed the unconsciousness, apnea and absence of pulse, and the cardiac monitor revealed ventricular tachycardia (VT) that was treated with 50J defibrillation and recovery of a pulse. The ECG showed a sinus bradycardia of 50 bpm. Other Advanced Pediatric Life Support maneuvers were performed. During the transportation to the Paediatric ICU the mother reported that when playing with his sister, her 3 yr old boy, sat on the girl's neck for a while, just before she lost consciousness.

The patient entered the ICU 60 minutes after the initial call, and was extubated 8 hours later. She was discharged from the Hospital 5 days later, without neurological deficits, normal brain MR and EEG. Establishing a pathophysiologic mechanism in this kind of scenario is sometimes difficult. It appears likely that either asphyxia/hypoxia or compression of the carotid sinus were the primary event that led to the cardio-respiratory arrest in this case. In the last 30 months, the Pre Hospital Emergency Medical Team (PHEMT) of S. Francisco Xavier Hospital assisted 64 cases of pediatric cardiac arrest. Only 18.75% (12) were resuscitated and transported to the hospital. In most cases the hospital results are unknown. The authors perform a review of pediatrics cardiac arrest outcomes in association with the most common etiologies. One major conclusion is that Advanced Pediatric Life Support Guidelines and medical information are fundamental to have positive results.

THROMBOLYTIC TREATMENT OF ACUTE MYOCARDIAL INFARCTION IN A PERIPHERAL HOSPITAL: RESULTS OF A FIVE-YEAR ACTIVITY

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Reperfusion is the main target of therapy in acute myocardial infarction (AMI). In a peripheral hospital like ours (serving a geographically isolated territory, far from the nearest Intensive Cardiologic Unit), the only possibility to correctly treat a patient with AMI within the "golden hour" is to start thrombolysis out of the cardiologic department. Since 1997 we have used a protocol, established with the agreement of cardiologists, to: shorten the door-to-EKG time (basic role of triage by nurses) and the time to clinical evaluation of patients, acquisition of serum laboratory tests (markers and coagulation), quickly establish telephone contact with the cardiologist (transmission of EKG, short discussion about clinical presentation, vital signs, and indications to treatment), initiate thrombolysis, and provide ambulance protected transport of patients during thrombolytic therapy. Thrombolysis is administered according to the guidelines of ACC-AHA: rtPA till 1999, rtPA+heparin since 1999. After the application of the protocol our times to intervention are the following: door-to-needle: 10 minutes; door-to-admission to cardiology unit: 1 hour. The outcomes of activity during the 1998-2002 period include: 124 treated STEMI patients; 98 reperfused patients (79%), and 1 major intra-cranial hemorrhage (0.8%). There were no significant differences between our results and the results of thrombolysis carried out in cardiology units. Ambulance transport did not increase the risk of major bleedings. Specific education of doctors and nurses is feasible, when a good agreement exists with cardiologists. Thrombolysis out of cardiologic unit environments is safe, efficacious and ethically dutiful. The extension of Territorial Emergency Medical Service and of out-of-hospital thrombolysis probably will slightly reduce the number of our treatments, but our protocol will remain useful for the next years, basing on the great number of AMI patients that do not call the Medical Emergency Phone Number.

EVALUATION OF DRUG INTERACTIONS AND ADVERSE DRUG REACTIONS IN PATIENTS ADMITTED THROUGH THE EMERGENCY DEPARTMENT

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Drug-Related Problems (DRP) can compromise patient safety, yet be unrecognized by emergency physicians (EP). Daily medications utilized, and medications administered in the emergency department (ED), inherently increase DRP risk to certain patients. However, ED pharmacist screening (PS) for DRP is not commonly provided. We previously reported 25% of non-admitted ED patients "at risk" (due to age and /or # of meds) for drug interaction (DI) have a DI, seldom recognized by the EP. Hypotheses: 1: DI are more frequent among all patients admitted from the ED than among selected "at risk" ED outpatients. 2: DRP are rarely recognized by EP, among eventual hospital admissions.

Methods: Retrospective review, 629 consecutive admissions to a 650 bed tertiary hospital (~25% ED-to-inpatient rate), 1/2/02-2/5/02. Demographics, admitting diagnosis, medication regimen, allergy, and past medical history were obtained from patients' charts. Patients were evaluated for the eight types of DRP defined by Hepler and Strand. DI were categorized by the Micromedex® drug information database. Also evaluated were frequency of DRP initiated by ED treatment, and evidence of awareness of DRP by EP.

Results: 305/629 (48.5%) of admitted patients had a total of 140 major and 802 moderate severity DI. DI were more frequent among admitted patients (Chi-square=33.24, p<.001). 414/629 (68.3%) had at least one DRP. 33/629 (5.3%) had an

adverse drug reaction (ADR). No ADR or major DI was caused by the EP; these ADR and major DI were present at time of ED arrival, yet not addressed in EP documentation. Anticoagulants caused over 60% of ADR.

Conclusion: DRP are very common among patients admitted from the ED, yet under-diagnosed during the ED visit. PS in the ED would permit earlier recognition of DRP. For Further Study: A decision rule (analogous to the Ottawa Ankle Rule) will be developed to identify ED patients likely to benefit from PS of ED patients' medications.

RECREATIONAL DRUG USE AND MEDICAL PROBLEMS AT A GREAT DANCE PARTY IN GHENT, BELGIUM

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Objective: A marked increase in the frequency of drug-related medical problems at nocturnal dance parties has occurred in the past years. 'I Love Techno' is one of Europe's largest rave parties attended by 37,000 people. These parties are associated with excessive consumption of illicit drugs such as ecstasy, cannabis and gammahydroxybutyrate. In this study we describe an overview of the drugs used and related medical problems.

Methods: Data on all patients evaluated in a medical station nearby the dance hall were registered prospectively. We also obtained information from the emergency department of the four surrounding hospitals. Data on drug use was based on information provided by the patient or bystander. Blood samples for toxicological screening were obtained from all those with clinical evidence of drug intoxication. These blood samples were screened for amphetamine, ecstasy, opiates, cocaine, cannabis and gammahydroxybutyrate.

Results: The number of patients treated at the medical station was 360. 85 of them had medical problems related to recreational drug use. 29 of the intoxicated patients needed transfer and evaluation in an emergency department of a nearby hospital. The clinical symptoms varied from agitation, seizures, syncope to serious loss of consciousness and hyperthermia. We have a full documentation of the intoxication of 22 of them. The predominant drug abused in these 22 was ethanol (n=16), cannabis (n=13) and amphetamines (n=11).

Conclusions: At rave parties, mainly illicit drugs are abused. This leads frequently to severe intoxications and requires specialized medical support. Although ravers mainly do not drink alcohol, we noticed a great number of ethanol intoxications at this party.

DRUGS-RELATED PROBLEMS IN AN EMERGENCY DEPARTMENT IN AMSTERDAM

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Background: Aim of this study was to gain insight into the sort and size of the drugs-related problems on the Emergency Department (ED) of the Onze Lieve Vrouwe Gasthuis in Amsterdam.

Methods: Prospective observational study during the months June - November 2000. The following data of all the patients who visited the ED with drugs-related problems were recorded: age, sex, nationality, way of presentation, presenting complaint, used drugs, performed diagnostics, treatment on the ED and continuation after leaving the ED.

Results: During the study period 214 (1%) of the patients presented themselves with drugs-related problems. The main group concerned mostly young foreign occasional users of soft drugs (117 patients, 54.7%). Their complaints were a-specific and harmless. The need for additional diagnostics was in limited (in 178 patients, 83.2%, no diagnostic tests were performed). Treatment consisted of reassurance (50 patients, 23.4%), observation (123 patients, 57.5%) and medication (85 patients, 39.7%). Nineteen patients needed another kind of treatment (suturing, plastering etc.) Only ten patients had to be admitted on the hospital. Reasons for admission were psychotic episodes, long lasting unconsciousness or respiratory problems.

Conclusions: The size of the drugs problem on the ED in the centre of Amsterdam is limited. The sort of problems concern mainly mild symptoms after use of soft drugs by usually young, foreign occasional users.

PEDIATRIC TRIMEDOXIME (TMB4) AND ATROPINE POISONING

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Personal chemical warfare defense kits (PCWDK) were distributed to the Israeli population during the recent Persian Gulf War. Lack of life-threatening adverse effects in 268 cases of pediatric atropine only injections during the 1991 crisis was described elsewhere. Since then, the atropine automatic injector was replaced by an automatic injector containing 0.5-2.0 mg of atropine and 20-80 mg of trimedoxime (TMB4) (dose according to the age of the person owning the PCWDK).

Objective: To describe the effects of combined TMB4 and atropine poisoning in children after accidental injection with an automatic injector found in the PCWDK. Case series: 15 children 1-15 years of age presented to the pediatric emergency department 30-120 minutes after an accidental injection of atropine and TMB4. Two children, 3.5 and 5 years old, received an adult dose (2 mg atropine and 80 mg TMB4). The site of injection was mostly upper extremity: finger (3/15) or hand (5/15). There were only few side effects attributable to atropine: tachycardia (range of maximal HR: 67-164), dryness of mucous membranes (5/15). There was no side effects characteristic to oximes – no patient demonstrated drowsiness, dizziness, nausea or muscular weakness. There were minor local complications including pain and local swelling at the site of injection. No side effect required any specific medical intervention, and all the patients were discharged from the emergency department within 4-6 hours after the injection.

Conclusions: In the cases presented, accidental atropine and TMB4 injection (even when a small child received an adult dose) was not associated with significant side effects.

THE INVESTIGATION OF ISCHEMIC MYOCARDIAL DAMAGE IN PATIENTS WITH CARBON MONOXIDE POISONING

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Introduction: The carbon monoxide (CO) poisoning due to flash gas heater or stove is an important health problem in our region. It causes significant pathologies in the body as well as death by decreasing oxygen-carrying capacity of blood. It is known that myocardium is an aerobic tissue, and highly sensitive to hypoxia.

Objectives: This study was planned to assess whether or not myocardial damage occurs in patients with CO poisoning.

Methods: Forty consecutive adult patients (30 females and 10 males) were included in this study. The mean age of the patients was 28.5±9.9 years (range: 15-56). The demographic characteristics, vital signs, the origin of CO gas, risk factors for coronary artery disease and smoking habit of the patients were recorded. The evaluation of Glasgow Coma Scale score, ECG, peripheral arterial blood gases, complete blood count, creatine kinase (CK), CK-MB, troponin-T measurements were performed in all cases. Additionally, myocardial perfusion SPECT was performed in three cases with COHb level over 50%.

Results: Sinus tachycardia, as a rhythm disorder, was observed in 9 cases. Bigeminy ventricular extrasystole was seen in a case in whom troponin-T was positive and myocardial perfusion SPECT evaluation was normal. Six of 40 cases (15%) had significantly increased CK and CK-MB levels with normal troponin-T measurements. High troponin-T levels (0.13 ng/ml) were detected only in 1 case whose COHb level was 61.3%. Myocardial SPECT was performed in 3 cases with COHb levels higher than 50% and no images compatible with defects could be identified.

Conclusion: The results suggested that significant myocardial damage and life-threatening cardiac hemodynamic changes do not develop in CO-poisoned patients with COHb level below 60 % and without any known underlying coronary heart disease. It is not necessary to routinely measure CK, CK-MB and troponin-T, and to routinely perform myocardial perfusion SPECT in acute CO poisoning cases without any ECG abnormality, ischemic cardiac symptoms or known ischemic heart disease.

DIAGNOSTIC VALUE OF URINARY AMANITIN IN MUSHROOM POISONING: A PILOT STUDY

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Amatoxin-containing species are responsible for the most severe cases of mushroom poisoning, with high mortality rate. Therefore, this poisoning should be ruled out in all patients with gastrointestinal symptoms after wild mushroom ingestion.

Objective. To determine sensitivity (SENS), specificity (SPEC), positive predictive value (PPV), negative predictive value (NPV), and diagnostic efficacy (DE) of urinary amanitin analysis in cases of suspected mushroom poisoning.

Methods. All cases of mushroom ingestion referred to a Poison Center during a one-month period were analyzed. Amanitin measurements were performed by ELISA method (functional least detectable dose 1.5 ng/ml; cut-off value not clearly established). Gastrointestinal symptoms latency and initial clinical assessment were considered alternative diagnostic tools. Definitive diagnosis was the gold standard.

Results. Among 61 patients included in the study, amatoxin poisoning was diagnosed in 10 cases. Urine samples were collected 5.5 to 92 hours after mushroom ingestion. Urinary amanitin DE was 80.3% (exact 95% confidence intervals 68.2-89.4), 93.4% (84.1-98.2), and 91.8% (81.9-97.3), based on the cut-off value considered (1.5, 5.0, and 10.0 ng/ml, respectively). Symptoms latency longer than 6 hours and initial clinical assessment DE were 70.5% (54.7-81.5) and 67.2% (54.0-78.7), respectively. To identify amatoxin poisoning, initial clinical assessment resulted more sensitive (SENS 100.0%, SPEC 60.8%, PPV 33.3%, NPV 100.0%), and urinary amanitin (cut-off 5.0 ng/ml) more specific (SENS 60.0%, SPEC 100.0%, PPV 100.0%, NPV 92.7%).

Conclusions. Urinary amanitin may significantly contribute to the diagnosis of mushroom poisoning. At present, the best diagnostic accuracy can be obtained taking advantage of both the high sensitivity and NPV of the clinical assessment performed by an experienced toxicologist, and the high specificity and PPV that characterize urinary amanitin.

ASSESSMENT OF THE MINIMUM CLINICALLY SIGNIFICANT DIFFERENCE IN ADULT PATIENTS WITH ACUTE THORACOABDOMINAL PAIN

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Introduction: Small numeric differences measured by the Visual Analog Scale (VAS) in pain may be statistically significant whereas may not reach clinical significance. We sought to determine the minimum clinically significant difference (MCSD) in VAS pain scores for acute thoracoabdominal pain in the emergency department (ED) setting and to determine the factors affecting this value.

Methods: Adult patients who presented to the ED with acute thoracoabdominal pain were enrolled. On presentation to the ED, patients marked the level of their pain on a 100 mm nonhatched VAS scale. At 20-minute intervals thereafter, they were asked to give a verbal categoric rating of their pain as 'much less', 'a little less', 'about the same', 'a little more', or 'much more' and to mark the level of pain on a VAS scale of the same type as used previously. All data were obtained without reference to prior VAS scores. A maximum of 3 comparisons was recorded for each patient. MCSD was defined as the mean difference between current and preceding VAS scores when the patient reports pain as 'a little less pain' or 'a little more' compared to the previous rating.

Results: Three hundred and six patients were enrolled, and 918 pain contrasts were recorded. Of these contrasts, 376 were rated as a little less and 52 as a little more pain. The MCSD in the current study was calculated as 24,2 mm (95% CI, 22,6 to 25,7 mm). There was no statistically significant differences in VAS pain scores based on gender (p=0,416), age groups (p=0,728), level of education (p=0,236), duration (p=0,586) and localization (p=0,077) of pain. MCSD of pa-

tients with renal colic was found to be greater than those with acute abdominal pain, lower back pain, muscle pain and non-specific abdominal pain.

Conclusions: Pain differences of less than the currently calculated MCSD (i.e., 24,2 mm), even if statistically significant, are unlikely to be of clinical significance.

PREHOSPITAL PAIN MANAGEMENT: A COMPARISON OF PROVIDERS PERCEPTION AND PRACTICE

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Background: Approximately 20% of all patients transported by ambulance to the ED have moderate to severe pain. Despite the known benefits of early pain control most patients do not receive analgesia by EMS providers (EMSP).

Objective: To assess the knowledge of EMSP and compare their practice perception to actual pain management in adults and children.

Design/Methods: EMSP were surveyed for knowledge of the pain treatment protocol and estimate the number and frequency of morphine administration for adults and children with; chest pain (CP), burn (Bu), and extremity injuries (Ext) during the previous 30 days. Per protocol, EMSP can administer IV morphine to patients in moderate to severe pain. Reasons for withholding morphine and opinion of the pain protocol were solicited. EMS patient care database was reviewed; the number of patients transported with any of the above assessment, and those who received morphine during a 12 months period was abstracted.

Results: Of 202 EMSP, 155 (77%) completed the survey. 83% had knowledge of the pain treatment protocol for both adults and children. In adults, EMSP estimated administering morphine to 26% with CP (CI 20-30), 22% with Ext (CI 20-30) and 80% with Bu (CI: 40-90). In children with Ext they estimated that 3% (CI: 8-20) received morphine. EMSP cited; inability to assess pain (93%), patient refusal (89%), drug seeking (89%), and no indication for IV (73%) as barriers for withholding morphine. Among the adults transported in 2001, 193/3864 CP (5%, CI: 4-6), 16/52 Bu (30%, CI: 20-40), and 38/941 Ext (4%, CI: 3-6) received morphine. In children 1/14 Bu (7%, CI 0.2-30), and 3/164 Ext (2%, CI 0.7-6) received morphine.

Conclusions: Significant disparity exists between EMSP perception of providing analgesia pain and their actual practice. Inability to assess pain may be an important barrier for withholding analgesia. Developing prehospital educational programs and pain assessment tools may improve EMSP compliance with pain treatment.

ANALGESIC USE IN EMERGENCY DEPARTMENT PATIENTS WITH MIGRAINE HEADACHES

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Objective: Patients with migraine headaches present to the Emergency Department (ED) because of significant pain. The objective was to examine the factors that influence the ED treatment of pain in migraine patients.

Methods: A retrospective chart review of migraine headache patients seen in three urban EDs, selected from ED logbooks from 2/15/01 through 6/10/02, was conducted. Patients were excluded if they were less than 18 years of age. With the use of the visual analog pain scale, 8-10 was considered severe, 4-7 as moderate, and 1-3 mild pain severity.

Results: Of the 136 patients with migraine who presented to the ED, 85% were female, with a mean age of 35 ± 9 years, and 99% were discharged from the ED. Diagnostic tests were performed in 96% of patients, most commonly computed tomography (15%) and complete blood count (14%). Patients' maximal pain severities were reported as severe (67%), moderate (9%), and mild (5%). A pain medication was given to 59% of patients with migraine and 37% received a narcotic. A parenteral medication was administered to 82% of patients for their pain. Patients were most commonly administered prochlorperazine (32%), promethazine (26%), and diphenhydramine (26%), meperidine (18%), ketorolac (16%), hydroxyzine (12%), morphine (9%), and sumatriptan (4%). There was a trend for patients in severe pain to receive a narcotic medication (76% vs 24%, OR = 2.0, $p = 0.09$), and these severe pain patients more often received a medication via the parenteral route (74% vs 26%, OR = 5.0, $p < 0.01$). Upon discharge, 24% of patients received a prescription for a narcotic, 16% received an NSAID, 10% an antiemetic, and 10% a prescription for sumatriptan.

Conclusions: Middle-aged females most often present with migraines to the ED in severe pain, and nearly all can be managed as outpatients. Patients with severe cephalgia more often received a parenteral medication in the ED.

ANALGESIC USE IN EMERGENCY DEPARTMENT PATIENTS WITH RENAL COLIC

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Objective: Patients with renal colic experience significant pain in the Emergency Department (ED). The objective was to analyze the factors that predict ED pain management and disposition.

Methods: Data analyzed in this study were from the National Hospital Ambulatory Medical Care Survey for the years 1999 and 2000. Patient selection was based on ED ICD-9-CM codes related to renal colic, renal and ureteral calculi, as well as hydronephrosis. Adjusted odds ratios (aOR) are presented from logistic regression.

Results: The 407 patients with renal colic and associated disorders represents 1.8 million, or 0.9%, of the ED patient visits. These patients were 42 ± 15 years old, 65% were male, 77% Caucasian, and 15% required admission because of their illness. Of the 260 patients (64%) who had documented pain evaluation in the ED, 102 (25%) reported to have severe pain and 102 (25%) moderate pain. In the 85% of patients who received a pain medication, the most commonly used medication class was the narcotics (68%), and the most frequently used individual medication was ketorolac (47%). Patients presenting with severe or moderate pain were 18% more likely to receive a narcotic than patients with lesser pain (91% vs 77%, aOR = 3.4, $p < 0.01$). Antiemetics were provided to 34% of patients, and were 3.8 times more likely to be given to patients who received a narcotic (45% vs 12%, aOR = 4.9, $p < 0.01$). Patients who received a parenteral narcotic were 27% more likely to be admitted (33% vs 26%, aOR = 4.4, $p = 0.01$).

Conclusions: Patients presenting with the severe pain associated with renal colic were most often treated with narcotics, and those treated with narcotics were more likely to require an antiemetic. Patients who received a parenteral narcotic were more likely to be admitted for their painful condition.

ANALGESIA FOR REDUCTION OF COLLES' FRACTURES

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Objective: The purpose of this study was to evaluate the adequacy of reduction on radiographs following three different analgesia techniques, i.e. Biers' block, haematoma block and intravenous sedation (Morphine and midazolam).

Method: Two year retrospective study of randomly selected 90 patients with 30 in each group, with age range of 35 to 95 years. Medical records and radiographs of patients attending Accident & Emergency department of our hospital were studied. Suitability of analgesia (Biers' block, haematoma block and intravenous sedation) was assessed before the administration of analgesia.

Results: Radial tilt was restored satisfactorily(less than 20 degrees dorsal tilt) in all patients with Biers' block, adequately in 97% with haematoma block and 94% with intravenous sedation. Radial inclination was restored adequately (more than 12 degrees) in 77% patients with Biers' block, 93% with haematoma block and 83% in sedation group. Restoration of height was adequate (more than 6mm) in 66% of patients in Biers' block group, 73% in haematoma group and 80% in sedation group.

Conclusion: No statistical difference was seen in either of the groups in terms of radiological improvement or complications of the techniques, although authors realise that relief of pain during manipulation of fracture is better in Biers' block and intravenous sedation. We conclude that haematoma block technique by local anaesthetic is safe and effective alternative to intravenous sedation and Biers block in reducing Colles' fractures.

UNDERTREATMENT OF ACUTE PAIN IN THE EMERGENCY DEPARTMENT: A CHALLENGE

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Substantial numbers of patients do not receive adequate relief from pain, despite the availability of therapeutic modalities that can provide satisfactory relief in the great majority of patients. A study of Emergency Department (ED) patients with acute fractures revealed that while 88% of these patients wanted pain medication, only 77% received it. The purpose of the present study was to improve pain management in the ED.

Methods: Patients 18 years or older attending the ED for acute pain related to orthopedic injuries were included. The study included a pre and post intervention phase. For each subject, nurses, physicians and the patient himself were asked to assess pain intensity according to the Visual Analogue Score (VAS). The administration of analgesics, time from arrival to analgesia, were recorded and compared between both phases. The intervention phase included education of the medical staff on pain management, inclusion of the VAS in the patients' chart, pain protocols, nomination of "pain trusties", and over the counter (OTC) license for pain- killers to the majority of the nurse staff. Seventy patients were included in each phase.

Results: Improvement in pain management was seen during the post intervention phase: 90% of patients got analgesics as compared to 66% in the pre-intervention phase, with a higher percentage of patients receiving opioids. Time from arrival to analgesia was shortened mainly in patients with moderate pain intensity (VAS 6-7). Nurses and physicians perception of pain as compared to the patient's own perception was significantly different. This difference lessened after intervention, mainly between patients and nurses.

Conclusions: 1) Inadequate pain management in the ED is related to sub optimal medical and nurse assessment, lack of consideration of the patient's own assessment of pain, poor knowledge and lack of pain protocols 2) Nurses as compared to physicians were capable to lessen the gap between patient and staff assessment of pain, leading to better pain management at least in patients with moderate pain and 3) Still not optimal, institution of pain management protocols, OTC license for pain killers and education are some of the interventions that can improve pain management. These interventions should be assessed periodically.

THE EMERGENCY DEPARTMENT MANAGEMENT OF ANKLE FRACTURES… IS THERE ROOM FOR IMPROVEMENT?

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Introduction: The aim of this study was to review the acute management of ankle fractures which were referred to a regional orthopaedic unit. The regional Orthopaedic unit of Waterford Regional Hospital provides orthopaedic services for the Emergency Department of Waterford Regional Hospital and also for 3 small emergency units in the area.

Methods: This is a retrospective study of all patients presenting with ankle fractures to Waterford Regional orthopaedic service from 1st January 2001 to 31st December 2001.

Results: 236 patients were identified during the study period. There were 139 males and 97 females. The median age of the cohort was 36 years. Open reduction and internal fixation was performed in 200 cases. 52% patients had definitive surgery within 24 hours of injury. These patients were evenly distributed between regional (64%) and peripheral (60%) emergency unit referrals. 24% patients required essential manipulation prior to surgery; however this had been performed in only 34% of cases prior to transfer. Two patients were referred with a pulseless foot. 11% patients were inappropriately referred to a fracture clinic. This resulted in an inappropriate delay in access to definitive treatment.

Conclusions: We identified significant deficits in the emergency management of acute ankle injuries. The principles and practice of emergency management of long bone fractures is an important area for consideration in induction programmes for junior doctors in Emergency Medicine.

DISPARITY IN SURGICAL ADMISSION BY PAYOR TYPE – AN UNINTENDED CONSEQUENCE OF "RATIONAL" HOSPITAL ADMITTING PRACTICES?

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Background: Inpatient beds in major children's hospitals in the United States are often limited in availability. Children are admitted to these hospitals primarily from two sources: scheduled admissions (chiefly for elective surgical procedures), and Emergency Department (ED) admissions which by nature are unscheduled and represent acute care needs. When resources are limited, hospital admitting practices may place these two groups of children into unintended competition. Children undergoing elective surgery are routinely allocated available beds in advance of their scheduled procedures, as part of an apparently rational approach to resource allocation. If, however, those children are more likely to be privately insured than are children with emergency conditions, then an unintended consequence is a restriction in access to health care for children without private health insurance. We undertook to determine if a disparity in insurance coverage indeed exists.

Method: We undertook a retrospective study of elective and emergent surgical inpatient procedures over one calendar year at a large teaching and referral hospital. A 2x2 table was constructed to compare the type of surgery (elective vs. emergent) and the payor source (private insurance vs. public payor). Chi square and odds ratios were calculated.

Results: 605 children underwent inpatient surgical procedures during the study period. 360 had elective procedures, of whom 276 (76.7%) were privately insured, as compared with 84 (23.3%) who were insured by Medicaid or other public insurance, while 245 had emergency procedures, of whom 152 (62%) were privately insured and 93 (38%) were publicly insured ($p < 0.001$; OR = 2.01; 95% CI 1.41 – 2.88).

Conclusion: Children undergoing elective surgical procedures were significantly more likely to have private or third-party insurance as were children undergoing emergency surgery. Implications: Disparities in care delivery according to payor type may represent the effects of barriers to health care access. Further, more generalized studies are required to determine if such barriers are being created by the situation described herein.

FEASIBILITY OF USING BIPAP FOR PATIENTS IN PULMONARY EDEMA IN A SUBURBAN TOWNSHIP EMS SYSTEM

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Objective: To determine the feasibility of using BiPAP in patients with pulmonary edema in a suburban EMS system. Design: Prospective nonrandomized observational study lasting 18 months. Setting: A mixed provider level EMS system serving 14,000 people, and covering 21.2 square miles with transport times averaging >20 mins. Subjects: All patients >18 in respiratory distress felt to be due to CHF and not requiring intubation. Intervention: Patients were treated according to existing protocols with the addition of BiPAP (Respironics), with IPAP and EPAP settings of 10 and 4. The unit was mounted inside the ambulance. Outcomes: The main outcomes were pulse ox saturations, vital signs and a patient dyspnea score. EMTs rated ease and benefit of treatment. Patient disposition from the ED and need for intubation were noted.

Results: During the study period there were 1,698 non-MVA runs, 183 for dyspnea. CHF was diagnosed or treated in 42 and 15 were placed on BiPAP. Two did not tolerate it, and in one the EMTs were unable to correctly use the machine. Nine out of the remaining 12 reported an improvement in dyspnea scores, with 7 noting it in the first 5 mins. A drop in respirations was seen in 9/12 (average decrease 4 rpm, range 0-10), with 6 decreasing in the first 5 mins. Improvements in pulse ox saturations were seen in 10/12 patients, also within the first 5 mins. Average improvement was 9.1% (range -6.3 - 61.4%). Many patients were upset when BiPAP was discontinued upon arrival in the ED. Most of the medics rated BiPAP as easy to use, although in a couple of instances they had problems. They felt that it was "very" beneficial in 6/12 and somewhat beneficial in 3/12 patients. Two (DNR) patients died in the ED. The rest survived to discharge. Three were intubated, and 7 went to a critical care unit. In the ED six of the patients placed on BiPAP were found to have pneumonia and/or exacerbation of COPD and not CHF!

Conclusions: The equipment is mostly easy to use and appears helpful early on in most patients in respiratory distress - fortunately as our medics seem to have a hard time distinguishing among the different causes! We suspect that this is not unique to our sguads. Other studies have been limited to EMS use of BiPAP in CHF. If confirmed to be affective in other causes of respiratory distress this would make it an even more useful intervention for EMS.

A MYSTERIOUS WOUND

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A 45 yrs old white man was brought to the Emergency Department after a car accident. The man, who was driving and was not wearing seat-belts, was hit at a slow speed by another vehicle in the left lateral posterior part of the car. As a consequence, he hit the window with his left side of the head, without breaking the glass. The patient had no symptoms and was brought to the hospital only for precautions. The patient did not have any external signs of trauma; a neurologic examination was negative as well. The eye examination detected a subconjunctival hemorrhage, with multiple loose lashes in the lacrimal sac.

The patient was surprised by the finding, because he did not complain of any pain or visual loss. The ophtalmologist found a perforating conjunctival wound of the sclera, with exposition of the uvea; possible intraocular foreign body. The patient was admitted to the Hospital and underwent an eye surgery under local anesthesia: the surgical report described a perforating wound at 3:00, exposition of the conjunctiva with scleral wound, presence of tiny glass splinter under the scleral edge; minimal visual loss. The case described is peculiar both for the accident dynamics and for the lack of an evident foreign body responsible for the damage. As Mecken said, every human problem has a solution simple, clear, reasonable, and wrong.

EXERCISE STRESS ECHOCARDIOGRAPHY ENHANCE DIAGNOSTIC ACCURACY IN CHEST PAIN UNIT

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To assess feasibility, negative (neg) predictive value (NPV) and diagnostic accuracy (Acc) of exercise-ECG (ex-ECG), exercise-Echo (ex-Echo), and exercise-SPET (ex-SPET) in pts with low-risk chest pain (CP).503 consecutive pts (mean age 62 y,36% female,2000-02 y) with (<24h) CP,non-diagnostic ECG,negative troponins and normal resting left ventricular. Detection of CAD as coronary stenoses ³50% in pts with ³1 positive (pos) test at least, and coronary events (CE) at 6-month in pts with neg tests.Of pts enrolled, 181(36%) had ³1 pos test at least; all these pts underwent angiography and finally 87(17% of the study population (sp) and 48% of pts with pos tests) had CAD. In addition 5 (0.1% of sp) with neg tests were recognised as having CAD at follow-up.Thus,overall diagnostic strategy in CPU had sens 95%, spec 80%,NPP 99%,PPV 48%, and acc 94%. Ex-ECG was pos in 105(21%); ex-Echo was pos in 105(21%); ex-SPET was pos in 155(31%). Among 398 pts with negative (neg) ex-ECG, 28(7%) were recognised as having CAD (Sens70%, Spec90%, NPV93%, PPV66%,Acc86).

Among 498 pts with neg ex-Echo,10 (2%) had CAD (Sens89%,Spec94%,NPV 97%,PPV77%, Acc93%).Among 348 pts with neg ex-SPET,8(2%) had CAD (Sens 91%,Spec83%,NPV98%,PPV54%,Acc84%). In this series of pts ex-Echo and ex-SPET had higher NPV(97% and 98% respectively; P=n.s.) as compared to ex-ECG (93%; P=.004), both these tests had higher sens(89% and 91% respectively;P=n.s.) as compared to ex-ECG (70%;P=.00001). Finally, ex-Echo showed a high acc (P=.0003 versus ex-SPET and ex-ECG), high spec(P=.01 versus ECG and P=.001 versus SPET), and optimal PPV(P<.0001 versus ex-ECG and ex-SPET).Low-cost and high availability ex-Echo is safe and effective in ruling out CAD in CP pts at CPU, especially valuable for implementation of early discharge. Indeed, ex-Echo showed similar NPV and higher accuracy as compared to high-cost and low availability ex-SPET. Thus ex-Echo is particularly appealing for those hospital without nuclear facilities.

SCREENING FOR DOMESTIC VIOLENCE: PREVALENCE AMONG WOMEN ATTENDING THE EMERGENCY DEPARTMENT

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Domestic violence against women has become a prevalent social and health issue that has serious consequences. Grynbaum et. al in Beer-Sheva showed an incidence of physical abuse of 10% in women recruited from primary care, when screened for domestic violence. The purpose of the present study was to screen for domestic violence among women attending the Emergency Department (ED).

Material and methods: The screening questionnaire was based on the Partner Violence Screening tool. The questions included: 1) Have you been hit, kicked, punched or otherwise hurt by someone within the past year? 2) Do you feel safe in your current relationship? 3) Is there a partner from a previous relationship who is making you feel unsafe now? The questionnaire was anonymous and was provided to 199 women. We did not intend to intervene but only to examine the reproducibility and acceptability of the tool we used. A woman was considered at high risk of domestic violence if she answered a positive answer to at least one of the three independent questions.

Results: 58% of the women were Jewish, 58% were married and 41% were housewifes. Their mean age was 32+ 7 years. 70% of their male partners were blue collar, workers and 30% belonged to the white collar sector. Thirty-two women (19%) were at high risk for domestic violence. 10% of the women were victims of physical abuse and the aggressor was the husband in 63% of the cases. A significantly higher number of Arab and not working women reported physical violence as compared to Jewish and employed women ($p<0.05$). 8% of the women, mainly unmarried, reported feeling insecure with current partners. Only 3% of the screened women felt unsafe with a partner from a previous relationship. The compliance with the screening tool was 95%.

Conclusions: 1) Three brief directed questions can detect a large number of women who have a history of partner violence: Arab and unemployed women are at high risk for physical abuse 2) Screening for domestic violence in the ED is effective: the rate of self-reported physical abuse was found to be similar to that reported in primary care in Israel. 3) Screening for domestic violence should be included as part of the anamnesis in every woman.

COMPUTED TOMOGRAPHY FOR SUSPECTED RUPTURED ABDOMINAL AORTIC ANEURYSM? FALSE-POSITIVE CLINICAL DIAGNOSES. OUR EXPERIENCE AT AN INSULAR HOSPITAL

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Ruptured abdominal aortic aneurysm may be misdiagnosed, leading to significant delay in treatment.

Purpose: to report our experience of false-positive clinical diagnoses confused with ruptured abdominal aortic aneurysm. Methods: CT and medical records of 10 patients, 1994-2000, with clinical misdiagnosis of ruptured abdominal aneurysm were reviewed. All patients were evaluated for: (clinical records: age and gender; maximum aortic size, etiology or site of active bleeding, anatomical spread of hematoma and outcome).

Results: Males (7/10), females (3/10), 4/10 (40%) died. Average age: 50. No abdominal aneurysm was found. Etiology-Site of rupture: pancreatic pseudoaneurysm, enphysematous pancreatitis, necrohemorrhagic pancreatitis, wünderlich syndrome, aortic disection: celiac-trunk, (2) left iliac, massive rectus sheath haematoma, and 2 gynecological massive bleeding neoplasms: inmadure and malignant teratoma and sarcoma uterine. Hematoma extended into retroperitoneum in 40%, around pancreatic gland and perirrenal space, and mainly in pelvis in 60%. We identified active and the source of bleeding in all cases. Our results were confirmed by surgery.

Discussion: CT is the technique of choice for evaluating these patients. Most patients come hemodynamically stable, and are referred to CT. Other causes of abdominal pain (including aortic disection, rectus sheath haematoma, retroperi-

toneal: pancreatic, kidney/adrenal diseases or gynecological bleeding) are shown in our report by CT. In all these cases, no aneurysm was found. Misdiagnosis is estimated in recent series in 4-20% of patients, leading to significant delay in treatment.

Conclusion: We believe that all patients hemodynamically stable in whom this diagnosis may be uncertain, would benefit from CT. The surgeon and the radiologist must be prepared to respond rapidly, these patients may become unstable at any time.

VALUE OF CT IN THE DIAGNOSIS AND MANAGEMENT OF PATIENTS WITH ACUTE ABDOMEN

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Purpose: To emphasize the importance of CT in the diagnosis and management of patients with acute abdomen. Most of these cases were managed with the clinical findings, and abdominal ultrasound, but when the diagnosis was unknown or more information was required, we performed abdominal CT.

Methods and material: We retrospectively reviewed 403 TC of acute abdomen between January 1990 and August 2000. A final diagnosis was made by surgery. Early CT imaging was obtained within 6 hours after patient arrival.

Results: 403 patients of acute abdomen were identified and the underlying causes were as follows: diverticulitis in 87/403 (21,6%), appendicitis in 73/403 (18,1%); bowel obstruction in 63/403 (15,6%); gastrointestinal perforation in 35/403 (8,7%), Acute cholecystitis in 31/403 (7,6%); pelvic inflammatory disease 31/403 (7,6%); necrotizing acute pancreatitis 23/403(5.7%); ileus in 23/403 (5.7%), cancer 13/403 (3,2%), ischemic bowel 10/403 (2.5%), aortic aneurysm rupture 8/403 (2%); hemorrhage, 6/403 (1.4%). These findings are similar to other studies.

Conclusion: CT is a useful tool to provide valuable information to demonstrate the cause of acute abdomen. Allows a rapid, cost-effective evaluation of these patients.. CT represents a useful tool in the decision for surgical or nonsurgical management.

PROGNOSTIC FACTORS IN ACUTE PANCREATITIS: A UNI-MULTIVARIATE ANALYSIS

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Purpose: A prospective study to analyse the prediction of mortality and poorer prognosis in patients with acute pancreatitis.

Methods and material: 275 patients with acute pancreatitis were reviewed from 1991-1999, and divided into mild 210 (76,64%) and severe 65 (23,35%) groups based on the Atlanta classification. We evaluated severity according to Ranson´s criteria and Apache II score, CT classification (Balthazar index, Hill, Van Kemmell´s classification, intraoperative findings). We performed a univariant and multivariant statistic study with lineal discriminant analysis.

Results: Overall mortality 17/275 (6,18%). Surgical treatment 24/275 (8,75%). Gender, age, body mass index, etiology, Ranson´s score and Apache II did not correlate with mortality. Hill´s and Balthazar´s classification did not reach significance either. Only the Van Kemmel´s classification and the number of organs failure had statistic value ($p<0.01$). After lineal discriminant analysis, the association of more than 4 Ranson´s criteria, Apache II > 8, Balthazar´s index =>4, grades IV, V in Hill´s classification and 4 organ failure had a predictive value for mortality.

Conclusion: The Van Kemmel´s classification and the number of organ failure had a predictive value for mortality. Balthazar´s index =>4, grades IV-V in Hill´s classification and 4 organs failure disclosed poor prognosis.

VALUE OF CT IN THE DIAGNOSIS AND MANAGEMENT OF PATIENTS WITH SUSPECTED ACUTE BOWEL OBSTRUCTION

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Purpose: A prospective study to evaluate the role of CT in the diagnosis of patients with suspected acute bowel obstruction in whom clinical and plain radiographic findings were inconclusive.

Methods and material: We reviewed 59 patients of presumed bowel obstruction that were assessed with conventional CT between January 1991 and August 2000. The final diagnosis was established by surgery.

Results: CT correctly distinguished between bowel obstruction and ileus in all cases and enabled us to modify an erroneous clinical diagnosis correctly in 14 (23.7%) of 59 cases; predicted the cause of obstruction correctly in 50/59 (84,7%) patients with confirmed bowel obstruction, but it failed to differentiate adhesions from internal hernias and radiation enteritis. CT imaging identified the obstruction site in all cases, strangulation in 27/59 (45,8%) patients and modified correctly the management in 12/59 (20.3%) patients, by changing a conservative management to an operative one.

Conclusion: CT is a valuable diagnostic procedure in distinguishing obstruction from paralytic ileus. It frequently establishes the cause, site of the obstruction and the presence of strangulation. CT findings lead to decisions to treat patients surgically in a significant number of patients.

USEFULNESS OF A QUALITY OF CARE FORM AS A CONTROL TOOL OF MORTALITY IN A MEDICAL EMERGENCY DEPARTMENT OF A TEACHING HOSPITAL

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Objective: To assess the process of care for patients who died in the medical area of the emergency department of an acute-care teaching hospital in Barcelona, Spain.

Methods: Retrospective study of mortality in the emergency department during the year 2002 excluding medical specialties. All physicians who fulfilled a death certificate during the study period were requested to complete an assess-

ment form regarding the care received by the patient in respect to clinical, diagnostic, and therapeutic aspects, which was ultimately analyzed by an independent reviewer.

Results: 1.- Epidemiological data: the number of visits attended at the emergency department was 82,698 and the number of medical visits 26,469. A total of 140 patients died (mortality rate 0.5%). Of these 140 patients, 51.4% were men. The mean age was 76.4„b15.3 years and the mean length of stay 1.99„b1.6 days. Senile dementia occurred in 32.9% of cases. 2.- Assessment of the clinical process: main diagnoses included respiratory tract infection (31.4%), progression of an oncological disease (12.1%), biventricular heart failure (10.7%), and septic shock (7.1%). Final causes of death were respiratory failure (40.7%), multiorgan failure (17.9%), and terminal illness (12.9%). In 9.3% of patients, the cause of death was unknown. Unexpected death accounted for 22% of cases. 3.- Assessment of the diagnostic process: the process of care was not in accordance with the protocol established in 1.4% of cases, there was a delay in radiological studies in 1.4%, and inconsistencies between the initial diagnosis and the suspected cause of death in 12.1%. Clinical autopsies were asked for in only 5.7% of cases. 4.- Assessment of the therapeutic approach: a total of 0.7% therapeutic errors occurred, 2.1% of drug-related adverse effects, and it was decided to limit the therapeutic effort in 9.3%.

Conclusions: - Self-criticism of the process of the patients¡¦ care in the daily practice contributes to improve scientific knowledge and professional expertise. - Measures to take for improving clinical care include the review of inadequate intrahospital processes, assessment of diagnostic/therapeutic errors in clinical sessions of the service and/or by a committee on mortality, review of cases in which protocols were not followed, increase in the number of clinical autopsies, and improvement of professional training regarding indication of the limitation of therapeutic effort.

VALORACIÓN DE CIFRAS INTERMEDIAS DE TROPONINA EN UN SERVICIO DE URGENCIAS

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Introducción: Una de las herramientas que se utiliza en el diagnóstico de Síndrome Coronario Agudo (S.C.A.), es la determinación de marcadores cardiacos y más concretamente la determinación de Troponina (TRP). La utilizada en nuestro hospital es la TRP-I, cuyo rango de normalidad es hasta 0,04 ng/ml, y a partir de 0,5 ng/ml es diagnóstico de infarto agudo de miocardio (I.A.M.). Por ello con frecuencia resulta difícil dar una orientación tanto diagnóstica como terapeútica a un paciente con sospecha de S.C.A. y valores de TRP-I entre 0,04 ng/ml y 0,5 ng/ml.

Objetivos: 1) Conocer el diagnóstico al alta de los pacientes con sospecha de S.C.A. y valores de TRP-I entre 0,04 ng/ml y 0,5 ng/ml. 2) Analizar la existencia de eventos cardiacos durante el ingreso hospitalario de los pacientes con sospecha de S.C.A. y valores de TRP-I entre 0.04 ng/ml y 0.5 ng/ml. Metodología: Estudio observacional retrospectivo seleccionando a todos los pacientes con sospecha de S.C.A. y TRP-I con valores entre 0,04 ng/ml y 0,5 ng/ml. en el servicio de urgencias, registrando el diagnóstico al alta, así como la aparición de eventos cardiacos durante la ingreso. La recogida de datos se realizó en el periodo comprendido entre el 1 de enero al 31 de mayo del 2002. Durante este año se ha realizado una 2ª revisión entre los meses de enero a abril para confirmar los resultados obtenidos el año pasado.

Resultados: Durante el periodo comprendido entre el 1-1-02 a 31-5-02 se atendieron en el Servicio de Urgencias 125 pacientes con sospecha se S.C.A. y cifras de TRP-I entre 0,04 ng/ml y 0,5 ng/ml. De todos ellos el diagnóstico al alta hospitalaria fue de patología cardiaca en 83 (66,4%), confirmándose el diagnóstico enfermedad coronaria en 49 (39,2%), de éstos 21 (16,8%) I.A.M. y 28 (22,4%) angina inestable, y en 34 pacientes (27,2%) el diagnóstico fue de insuficiencia cardiaca exclusivamente. En 13 pacientes (10,4%) el diagnóstico al alta fue de infección respiratoria más insuficiencia cardíaca, y en 29 pacientes (23,2%) el diagnóstico era no cardiáco. De los 125 pacientes presentaron complicación cardiaca durante el ingreso exclusivanente aquellos cuyo diagnóstico al alta era enfermedad cardiaca. Ocurrió evento cardiaco en 29 pacientes (23,2%). En 9 pacientes (7,2%) desarrollaron un fallo cardiaco que acabó en muerte, 5 pacientes (4%) desarrollaron complicación isquémica y 15 pacientes (12%) presentaron taquiarritmia.

Conclusiones: La aparición de cifras de TRP-I en valores entre 0,04 ng/ml y 0,5 ng/ml confirman el diagnóstico de enfermedad cardiaca en más de la mitad de los pacientes. Es preciso no infravalorar este rango analítico de TRP-I, pués casi hasta un 25% de pacientes van a desarrollar una complicación cardiaca, que incluso puede terminar en exitus.

PREVALENCE OF DEEP VENOUS TRHOMBOSIS IN A BASIC HEALTH AREA: REVIEW OF 2003

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Background/Objectives: Deep venous thrombosis (DVT) is a pathology not easily detected in the hospital emergency room. We present our observations on 80 patients diagnosed within a period of six months.

Methods: A cross-sectional, prospective study of over 31,000 patients in order to describe the age, sex, arrival method, d-dimer ELISA test (d-vidas) and their correlation with the pathology identified on an eco-doppler.

Results: Our prevalence was 3,875 x1000 habitants (80/31000). 58 (72.5%) were female. The main age group in our study was the 60-74 year old group (41.3%). Most patients arrived by a non medical ambulance (87.5%) and by their own initiative. 41 patients (51.0%) had a positive d-dimer, 14 (17.5%) a negative value, 18 did not have a sample tested and 6 were missing values. 43 patients (53.1%) were discharged home, including 21 who had an positive d-dimer. Eco-doppler was positive in 41 patients (50.1%), 27(30.3%) were negative and 11 not reliable.

Conclusions: Elderly women were more likely to have a DVT in our study. D-dimer in our hospital had a sensitivity value near 50% and there was a high correlation with the diagnostic eco-doppler. Half of our patients, especially those with distal DVT had an ambulatory treatment.

PROTOCOLO DE DIAGNOSTICO RADIOLÓGICO EN PACIENTES CON SOSPECHA CLINICA DE TROMBOEMBOLISMO PULMONAR. RESULTADOS DEL PERFIL DE LOS PACIENTES

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Objetivos: Análisis de los resultados de la aplicación del protocolo de estudio de los pacientes con sospecha clínica de tromboembolismo pulmonar agudo (TEPA) atendidos en la Unidad de Urgencias del Hospital de Poniente de Almería.

Pacientes y Metodos: Estudio descriptivo transversal de los 56 pacientes con sospecha de TEPA atendidos en nuestra Unidad de Urgencias en el periodo junio 2001 a junio 2003, a los que se aplicó el protocolo establecido a tal efecto y consensuado con el servicio de Radiodiagnóstico.

Resultados: De nuestro grupo de pacientes 29 eran varones y 27 mujeres, y en el 44,6% se identificaron una o varias enfermedades concomitantes en el momento de presentar el cuadro clínico sospechoso de TEPA. El 37,5% llevaban una vida sedentaria, al igual que otro 37,5%, que eran hipertensos. El 25% consumían tabaco, el 21,4% presentaban algún tipo de valvulopatía, el 17,9% eran dislipémicos, el 14,3% tenían alguna arritmia de base, el 12,5% padecían diabetes mellitus, y también el 12,5% tenían antecedentes personales de cardiopatía isquémica. De las exploraciones complementarias practicadas el dímero-D fue normal en el 21,4% de los casos y la eco-dopler de miembros inferiores fue negativa en el 33,9%. La radiografía de tórax fue normal en el 17,9% de los pacientes, en el 50% no mostró un patrón patológico definido, mientras que el 14,3% presentó derrame pleural, el 16,1% condensación y el 1,8% oligoemia. La TAC torácica fue normal en el 39,3% de los pacientes y mostró anomalías en el 60,7% restante, con un patrón de afectación de territorio de bronquio principal en el 19,6% de los casos, afectación lobar en el 14,3% y patrón de anomalía en cono en el 7,1%; el 58,9% restante no mostró patrón patológico definido. Se practicó fibrinolisis en el 7,1% de los pacientes, en el 58,9% se instauró tratamiento anticoagulante y en el 16,1% antiagregante.

Conclusiones: Los pacientes con sospecha clínica de TEPA presentan altos porcentajes de antecedentes de cardiopatía isquémica y/o factores de riesgo cardiovascular, así como de valvulopatías o arritmias de base. Un elevado porcentaje de pacientes con sospecha clínica de TEPA presenta dímero-D, eco-dopler de miembros inferiores, radiografía de tórax y/o TAC torácica normales. En los casos en los que existen hallazgos radiológicos el patrón más frecuente es el de alteraciones inespecíficas.

SCREENING THROMBOEMBOLIC DISEASE IN THE EMERGENCY DEPARTMENT: COMBINED USE OF "D" DIMER LEVELS AND WELLS PROBABILITY SCALE

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Aim: To assess the role of the determination of D dimer levels in the diagnosis of deep venous thrombosis (DVT) and Pulmonary Embolism (PE) in patients attending to the Emergency Department (ED) of our hospital.

Methods: Study design: A prospective, observational study I planned, to evaluate a diagnostic strategy for DVT and PE Sample size and study patients characteristics: 124 patients older than 18 year presenting with symptoms compatible to DVT/PE attending to an 8000 cases/year ED were included from May to October 2002. Diagnostic procedures: After a clinical questionnaire and physical examination all patients were classified according to their probability of suffering from DVT/PE using the Wells scale. In every of them D dimer plasmatic levels were obtained. As a consequence of the results of D dimer levels determination and Wells scale other examinations like Echo Doppler and/or phlebography for patients suspected of having DVT or V/Q gammagraphy or helicoidal CT for patients suspected of having PE were performed The evaluation of the results of every single examination was made by independent doctors that did not know the results of the clinical probability assessment (clinical questionnaire, physical examination, Wells scale and D dimer determination). D dimer determination: Immunoassay Clinical follow-up: After completion of TVP/PE protocol Discharge or Hospital admission is decided and a 3 month clinical follow-up is initiated recording confirmation or not of clinical suspicion, complications or other diagnoses.

Statistical analysis: A descriptive sample analysis has been made, including central tendency a dispersion parameters and frequency distribution. Data from patients having low to intermediate probability of TVP/PE are analysed separately. Te following parameters has been also studied: Sensitivity (Se), Specificity (Sp), Positive Predictive Value (PPV), Negative Predictive Value (NPV), Positive Likelihood Ratio (L+), Negative Likelihood ratio (L-) and Test Efficacy. RESULTS: Data of 142 patients were analysed (64 men and 78 women). 44,36 of them were in the range of 66-85 year old Among patients with clinical suspicion of PE considered low to intermediate, dimer D plasmatic levels determination showed a Se of 100%, Sp of 43,28%, NPV of 100% and L- of 0 Among patients with clinical suspicion of DVT considered low to intermediate, the abovementioned D dimer determination showed a Se of 83,33%, Sp of 51,66%, NPV of 96,87% and L- of 0,32.

Conclusions: 1.- Grouping patient with low and intermediate probability improves the usefulness of Wells scale in decision making. 2.- To associate Wells scale (low and intermediate probability) and D dimer determination constitutes a good way for screening thromboembolic disease in ED, lowering the rate of utilisation of other diagnostic tools (Echo-Doppler or phlebography) and empiric treatment approaches.

COMPARISON OF NASAL SUMATRIPTAN AND ORAL RIZATRIPTAN VERSUS INTRAVENOUS KETOROLAC IN THE EMERGENCY MANAGEMENT OF MIGRAINE ATTACKS

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Triptans are considered nowadays as drugs of choice in the acute management of severe migraine, being recommended the use of NSAID in headache of low to moderate intensity. This recommendation, however, applies essentially to the oral NSAID preparations.

Purpose: To compare the effectiveness of 20 mg nasal sumatriptan (SUM) and 10 mg oral rizatriptan (RIZ) with 30 mg intravenous ketorolac (KTC) in the emergency treatment of migraine attacks.

Patients & methods: The sample included 46 patients: 15 of them received SUM, 15 RIZ and 16 KTC. Most of them (N=19) had previously tried a triptan, another NSAID or mixed drugs without reaching significant relief. Headache intensity was assessed in a 5-points scale at 0, 15, 30, 45, 60 and 90 minutes. Persistence of associated symptoms and drug-related side effects were recorded. Two-way analysis of variance was applied to compare groups' evolution.

Results: No differences were found among groups in the evolution of migraine; 90 minutes after drug administration 9 (60%) of SUM-treated patients, 11 (73.3%) of RIZ-treated patients and 10 (62%) of KTC-treated patients reported to be pain-free. Persistence of associated symptoms (nausea/vomiting and photo/phonophobia) was similar in every group. Adverse reactions were reported only among triptans-treated patients (7 cases in the SUM-treated group and 3 cases in the RIZ-treated group), and they were mild and self-limiting in all of the cases.

Conclusions: Triptans are effective and well-tolerated drugs and their use can decrease patients' assistance to the emergency department; once there, the use of ketorolac - an effective and cheaper drug - by intravenous route should be considered.

ACUTE PAIN MANAGEMENT IN EMERGENCY UNITS

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Acute pain is the most common cause of consultation at Emergency Departments. Analgesia is a fundamental aspect in the integrated management of the patient that goes to the Emergency Departments. The treatment of acute pain remains unsatisfactory despite advances in pain research and the publication of numerous guidelines. Objectives: 1) To describe the characteristics of patients that go to Emergency Departments in Hospitals. 2) To describe the characteristics of pain. 3) To describe pain treatment in Emergency Departments.

Materials And Methods: Descriptive transversal study. Patients were evaluated at the beginning of the management in 15 Regional Hospitals of Spain, members of the Emergency Study Group of Regional Hospitals (GEMUHC). The research was carried out over three periods of 24 hours. Patients were evaluated by a pain questionnaire and the Visual Analog Scale (VAS) was used to measure pain intensity. Results were analysed by a descriptive and analytic method.

Results: The results have been expressed in terms of number of cases in which that variable was studied and percentage. The total sample consisted of 3575 patients who went to Emergency Units. 49.8% were men and 50.2% were women. The average age was 39 years (DE: 24.5). Pain was the main cause of visiting the Emergency Unit in 52.3% of cases and 59.6% of patients said that they had pain when they were asked about it. Pain was significantly related to marital status ($p<0.000$), socio-economic status ($p<0.001$), educational level ($p<0.000$) and area of residence ($p<0.000$). Pain was more common in the working population (70.7%), married people (64.5%), primary education (70%) and the non-urban population (67.5%). Main characteristics of pain were: acute pain in 90.5% (n=2063), continuous pain in 75.8% (n=1849) and in 59% of the sample there was also inflammation (n=244). The average intensity of pain was 51 (VAS) and 19.2% of patients had a VAS > 7. The most frequent locations of pain were in the lower limbs (19.5%)and the abdomen (18.8%) (general abdominal pain and epigastric pain). Cephalea was present in 16.5% of cases and usually it was of the whole head. Pain treatment was carried out in 37% of patients (n=2018) and the most frequent treatment was ketorolac (28.2%), metamizol-dipyrona (22.6%) and two or three drugs simultaneously (18.7%). 44 patients (6.3%) were treated with opioids and tramadol was the most frequent used (4.8%). There were significant differences related to the intensity of pain ($p<0.004$), resulting in the use of more than one drug simultaneously in patients with VAS scores greater than 7. Patient satisfaction with previous analgesic treatment was low in 49.2% of cases.

Conclusions:

- Pain is the main symptom of patients attending at Emergency Department
- The most frequent characteristics of pain suffered were: acute pain, continuous pain, intense pain. The most common sites of pain were lower limbs and abdomen.
- The number of patients actually treated for pain was very low. The use of opioid analgesics in Emergency Departments was very low although pain intensity was rated as high in 19.2% of cases.
- The intensity of pain was the variable used to determine the type of the treatment.

COMPARATIVE EFFECTIVENESS OF INTRAVENOUS METOCLOPRAMIDE VERSUS KETOROLAC IN THE TREATMENT OF ACUTE MIGRAINE ATTACKS

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Metoclopramide is widely used in the acute treatment of migraine- associated nausea and vomiting. However, when administered intravenously, it has been also reported to be effective in relieving attack's pain.

Objectives: To evaluate the effectiveness of 10 mg intravenous metoclopramide (MTC) as single agent versus 30 mg intravenous ketorolac (KTC) in the symptomatic treatment of migraine attacks.

Methods: 31 patients requiring acute migraine treatment received either metoclopramide (N=15) or ketorolac (N=16). Most of them (N=19) had previously tried a triptan, another NSAID or mixed drugs without reaching significant relief. Headache intensity was assessed in a 5-points scale at 0, 15,

30, 45, 60 and 90 minutes, and subjects' improvement was scored in a 7-points scale after drug injection. Persistence of associated symptoms was recorded. Two-way analysis of variance was applied to compare groups' evolution.

Results: Ninety minutes after drug administration 50% KTC and 38% MTC reported mild pain, and 50% KTC and 62% MTC reported no pain; 33% KTC and 16% MTC reported moderate improvement, 17% KTC and 31% MTC very much improvement, and 50% KTC and 46% MTC total recovery; no significant differences were found between groups. As expected, MTC was superior on nausea and/or vomiting; neither drug ameliorated photophobia nor phonophobia. No side effects were reported by any subject.

Conclusions: Intravenous metoclopramide seems highly effective in emergency migraine management, and can be a good choice in patients refractory or intolerant to triptans and/or NSAIDs.

HEMODYNAMIC INSTABILITY AND ATRIAL FIBRILLATION: IS DC CARDIOVERSION THE ONLY ALTERNATIVE? ANALYSIS OF CLINICAL PRESENTATION AND MANAGEMENT IN THE ACUTE SETTING (THE GEFAUR-3 STUDY)

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Objectives: To determine the real magnitude and clinical presentation of hemodynamic instability (HI) in patients (pts) with atrial fibrillation (AF) and to analyse management strategies (MS), its effectiveness and its influence on outcome in the acute setting.

Methods: prospective multicenter study carried out in 12 emergency departments during July-2000, February-2001 and May-2002. HI was defined as symptomatic drop of BP (<90/50 or <30mm previous BP) and/or organ dysfunction [(severe heart failure (HF), angina, MI, renal failure, acidosis or others with immediate vital risk)].

Results: 2550 pts included, 59% female, age 75±12y. (58%>75y). HI was diagnosed in 4.5%, with a higher prevalence of structural heart disease (63vs51%, p=0.005, OR=1.2), CAD (37vs28%, p=0.05, OR=1.3), HF (34vs24%, p=0.02, OR=1.4), secondary (non-cardiac origin) AF (8vs3%, p=0.01, OR=2.5), rapid HR (64vs50%, p=0.02, OR=1.4) and <BP (100±30/60±20 vs 140±20/78±15 mmHg, p<0.001). Pts with IH attended more frequently due to dyspnea (50vs33%, p=0.001, OR=1.6) and syncope (10vs3%, p=0.02, OR=3.3). In the multivariate analysis HI was associated with syncope (p=0.02), HF (p=0.005), HR<60 (p=0.02) or>100bpm (p=0.001). IH was attributable to non-cardiac diseases in 33% (56% sepsis, 8% thyrotoxicosis, 7% pulmonary thromboembolism, 7% hypoxemia). Rate control (RC) was more frequently performed (50vs31%, p<0.001, OR=1.6) due to a higher use of calcium-blockers (21vs11%, p=0.005, OR=2) as were anticoagulation (72vs58%, p=0.04, OR=1.4) and cardioversion (CV) (20vs8%, p=0.05, OR=2), higher use of DC-CV (18vs7%, NS) and amiodarone (90vs45%, p<0.001, OR=2.1). RC (68vs18%, p<0.001, OR=6.4) and CV (38vs15%, p=0.07, OR=3.3) were more frequently performed if HR>100 bpm, no MS were applied if HR<60. In the multivariate analysis RC was associated with absence syncope (p=0.02) and HR>100bpm (p=0.02) as was CV with hypertension (p<0.001), AF<48h (p<0.001), angina (p<0.001), dyspnea (p<0.001) and sex (male, p=0.05). Symptom control was more frequently achieved if IH was related with AF (55vs35%, p=0.007, OR=1.8), calcium-blockers were used for RC (60vs28%, p=0.05, OR=2.2) or CV was effective (66vs14%, p=0.05, OR=4.7). IH was associated to a longer ED stay (76vs45%>4h, p=0.002, OR=2) and more admissions (77vs49%, p<0.001, OR=1.6). Overall mortality was 6.25% (half of them attributable to non-cardiac diseases), no differences between MS.

Conclusions: IH is an uncommon feature of AF in the acute setting, usually manifested as dyspnea or syncope. RC (calcium blockers) and pharmacological-CV (amiodarone) are more used MS but the therapeutical gold standard (DC-CV) is underused. Despite of this, symptom control is frequently achieved and overall mortality is surprisingly low (possibly biased for the short stay of these pts in the ED). Although DC-CV is the best MS in most of pts, our data suggest that RC could be an acceptable alternative when there are very few possibilities of achieving sinus rhythm (structural HD, higher HR, long duration AF) and in secondary (non-cardiac origin) AF.

SITUACIÓN ACTUAL DE LOS FACTORES DE RIESGO CARDIOVASCULARES EMERGENTES EN EL CONTEXTO DEL SÍNDROME CORONARIO AGUDO

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Objetivos: Conocer la prevalencia y determinar la asociación de hiperhomocisteinemia y de infección por Chlamydia pneumoniae en el Síndrome Coronario Agudo (SCA), comparar los niveles séricos de marcadores de inflamación entre la población general y las diferentes formas clínicas del SCA y conocer los cambios atribuibles a la nueva definición de infarto de miocardio (Joint European Society of Cardiology/American College of Cardiology Committee, 2000).

Metodología: Estudio seroepidemiológico, analítico de casos y controles (1:2), no apareados sobre una muestra de 198 controles y 98 pacientes con SCA.

Resultados: 1. La prevalencia de homocisteinemia superior a 12 mcrmol/L en pacientes con SCA fue del 51%. La seroprevalencia a Chlamydia pneumoniae en los casos fue del 94.6%. 2. La proporción de pacientes expuestos a homocisteína por encima de 12 mcrmol/L fue significativamente superior en pacientes varones con SCA entre 55 y 64 años respecto a los pacientes sin enfermedad coronaria. 3. La seroprevalencia de anticuerpos a Chlamydia pneumoniae con título superior a 1:64 fue significativamente mayor en la población con SCA que en los controles. 4. El aumento de proteína C reactiva y de Fibrinógeno se asoció significativamente con la presencia de daño miocárdico en los pacientes con SCA. 5. Existen evidencias significativas que apuntan a elevaciones discretas de la proteína C reactiva en pacientes con angina inestable sin daño miocárdico determinado por troponinas, frente a población control. 6. Los factores de riesgo tradicionales continúan siendo determinantes en el SCA. El sexo varón y la hipercolesterolemia se mostraron como los más significativos. 7. La aplicación de los criterios de la nueva definición de infarto, modificó sustancialmente el diagnóstico de infarto agudo de miocardio en el SCA objetivándose un aumento significativo de su prevalencia pasando del 34.7% al 53%.

RISK FACTORS FOR STROKE AND THROMBOPROPHYLAXIS IN ATRIAL FIBRILLATION. WHAT HAPPENS IN DAILY CLINICAL PRACTICE? (THE GEFAUR-1 STUDY)

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Background: The indications for stroke prophylaxis in atrial fibrillation (AF) are detailed in widely available guidelines based on the results of several clinical trials. However, there is contradictory data concerning the applicability of these recommendations in daily practice due to differences on patients' risk profiles (embolic and haemorragic). Objectives: to determine patients risk profile, the real prescription of stroke prophylaxis and the applicability of the guidelines (ACCP, 1998) in a scenario of daily clinical practice.

Methods: Prospective observational study carried out in 12 emergency departments (ED). Data was collected on clinical-epidemiological variables, risk factors (RF) for stroke, the prophylaxis prescribed and the reasons for no anticoagulation. Therapeutic recommendations were not made.

Results: We included 1,178 patients, age 74±12 years, 55.6% older than 75 (28% of them disabled). Hemorrhagic complications of current antithrombotic treatment (ATT) were responsible for the ED attendance in only 0.8% of the cases and 1.8% of hospital admissions while embolism was responsible of 3.7% and 10.5% of them. Of patients without current ATT, 86% had RF for stroke (2 RF 28%, >2 RF 30%), but anticoagulation was only prescribed to 31.8%.In the multivariate analysis its indication was only associated to paroxysmal AF (OR=3.61; p<0.001) and a heart rate > 100 bpm (OR=1.69; p=0.03),while a negative correlation was obtained with disability (OR=0.28; p=0.012), current antiplatelet treatment (OR=0.04; p<0.001) and cardioversion attempt in the ED (OR=0.24; p=0.039). Anticoagulants were formerly contraindicated in 23 % . Reasons argued for not to prescribe anticoagulants in spite of the presence of RF for stroke were advanced age (12%), high risk of haemorrhage (28%) or it was not considered indicated by the physician (24%).

Conclusions: Patients with AF attended in the ED have a higher embolic risk than those included in clinical trials and a similar risk of haemorrhage. It suggests that the benefits from acting in accordance with the guidelines recommendations in ED daily practice would be even greater. In spite of this, the prescription of anticoagulants is insufficient, fundamentally due to the lack of knowledge about the indications for prophylaxis and the inappropriate impact of the advanced age of the patients in medical decisions. Given the high effectiveness of antithrombotic treatment, application of clinical practice guidelines in routine practice should be emphasized with the aim of improving the prognosis and quality of life of these patients.

CHEST PAIN UNIT: EXPERIENCE OF HOSPITAL CLINIC AFTER 4 MONTHS OF WORKING

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Background and Objective: Chest Pain Units (CPU) have proven to be useful in decreasing hospital admissions for patients with suspected acute coronary syndrome (ACS) in the US. In Spain, development of these units has been scarcely analyzed. We evaluated the first 1000 patients presenting to the Emergency Department (ED) with possible ACS.

Methods: We evaluated patients with chest pain (CP) who attended our ED between June 26- October 20, 2002. Our algorithm assesses patients at two points. After clinical evaluation and first ECG the patients are classified as: 1-ST-elevation acute myocardial infarction (STEAMI), 2-definitive non ST-elevation ACS (NSTEACS), 3-probably ACS, and 4-no coronary CP. Patients in group 3 remain in the CPU and follow a protocol of continuous ECG monitoring and serial cardiac markers (CPK-MB and troponin I) at arrival and 6-9h later. After this time, patients are reassessed and classified as: A- high-risk ACS, B- intermediate risk ACS, and C- low risk ACS/probably ACS. In the group C patients an ECG exercise test was performed under a cardiologist's supervision, when it was possible, before discharge.

Results: We analyzed the first 1000 patients admitted at the CPU. There were 556 (56%) male and 444 (44%) females with a mean age of 57.8 years (range 14-95). The mean waiting time to the first ECG was 14 ± 11.3 minutes. At this point, 49 (5%) were diagnosed as having a STEAMI, 182 (18%) as a definitive NSTEACS, 289 (30%) as a probably ACS, and 480 (48%) as having a no coronary CP syndrome. 30/49 patients with STEAMI were treated with primary angioplasty and 19/49 with thrombolysis (3 of them required rescue angioplasty). The mean waiting time was 81.5 ± 57.7 min for angioplasty, and 31.3 ± 29.3 min for thrombolysis. After the observation period, the 289 patients in group C with "probably ACS" were diagnosed as: 20 (7%) high-risk ACS, 99 (34%) intermediate risk ACS, and 170 (59%) low risk ACS/probably ACS. After cardiologist evaluation, 98/170 patients were selected for an ECG exercise test. Twelve of them were positive, 81 negative and 5 inconclusive. Four of 170 patients with low risk ACS/probably ACS were admitted and the 166 remaining patients were discharged.

Conclusions: The CPU has demonstrated its usefulness for evaluating patients with possible ACS in our ED. It has allowed us to safely discharge patients who would otherwise have been admitted, using low cost complementary tests (serial cardiac markers and ECG exercise test). On the other hand, the CPU has reduced the delay in the identification and treatment of ACS in our ED.

THROMBOLYSIS IN ACUTE MYOCARDIAL INFARCTION PATIENTS IN EMERGENCIES DEPARTMENT. A YEAR OF EXPERIENCE

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Objectives: To analyze the results of thrombolytic administration in acute myocardial infarction with elevation of the ST (IAM) patients.

Patients and Methods: Descriptive study of 51 AMI patients with elevation of the ST segment, attended to in our Service of Urgencies during the period from May 2002 to June 2003, based on data in the national registration RESIM (I Register in Emergencies Infarto agudo de Miocardio).

Results: In our sample of 51 patients, 72% were male, with mean age 64.6 years. Antecedent history included arterial hypertension and tobacco use (32%), diabetes mellitus (12%) and dyslipidemia (12%). 10% presented with no history of cardiovascular risk factors. The first electrocardiogram (ECG) was obtained in hospital urgencies in 78% of the cases. Aspirin was administered in hospital urgencies to 72% and sublingual nitroglycerine to 76%. In 81% of the patients an intravenous line was not started until they arrived at the hospital, only 11% of the patients arrived monitored, and 7% had received some intravenous medication. On admission to urgencies, 92% of cases had thoracic pain. 76% presented as Killip I, in front of 8%, respectively, of Killip II, III and IV. The priority for thrombolysis was classified based on the criteria accepted by the groups RESIM and ARIAM. 52% of our patients were priority I, and 48% were priority II. 92% of the patients received thrombolysis with TNK-tpa (tenecteplase).

Conclusions: Most of the patients treated in our service of urgencies for AMI go directly to the hospital by their own means. Of those that receive attendance out of-hospital, too few received an ECG, an intravenous line, monitoring or any administered medication. The patients waited about 90 minutes to make contact with the sanitary system after symptom onset.

CHRONIC OBSTRUCTIVE LUNG DISEASE (COPD) (I): ETIOLOGY OF THE EXACERBATIONS, CORRELATION BETWEEN THE ADMISSION DIAGNOSIS, DISCHARGE, AND COMORBIDITY.

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Objectives: The purpose of this study was to analyse the etiology of the exacerbations of the patients with COPD that visited the emergency department, to find out the correlation between the emergency department etiological diagnostic and internal medicine, to determine the comorbidity, and to estimate the number of those who were admitted to the hospital.

Methods: Descriptive and retrospective analysis of 100 consecutive patients with COPD who visited our emergency department for exacerbation. This is characterized by increased dyspnea, increases in sputum production, purulence of sputum or any combination of these three symptoms. Clinical history review and filling-in of a questionnaire. Statistical analysis with the G-Stat 1.1 program.

Results: Three cases were excluded because of filling-in errors. The acute infection of the intrapulmonary airways was the most frequent etiology of the exacerbation (57.65% acute bronchitis and 11.76% pneumonia). Heart failure was identified in 10 patients, pulmonary embolism in one and lung cancer in another. More than a half of the patients visited (51.06%) were admitted to the hospital and in 80.49% cases the emergency department and internal medicine diagnostics were the same. The most frequent comorbidity found was hypertension (42.27%), diabetes mellitus (30.93%), tabaquism (40.21%), ischemic cardiopathy (21.74%) and heart failure (20.6%). 5.75% were admitted to the hospital 4 or 5 times since last year. That was the first visit for 37.93%, but 34.48% had been admitted 2 or 3 times previously.

Conclusions: The most common cause of COPD exacerbation is the infection and heart failure. Almost half of the patients are discharged from the emergency department once visited. There is a high concordance among the diagnostic on admission and on discharge. Hypertension is the most frequent comorbidity found. There has been at least one previous hospital admission among the majority of the patients we visited.

PACIENTES TRATADOS CON VENTILACIÓN MECÁNICA NO INVASIVA (VMNI) TRAS INGRESO POR DESACOMPENSACIÓN DE PROCESO CRÓNICO DE BASE. OXIGENOTERAPIA CRÓNICA DOMICILIARIA (OCD) COMO FACTOR DE RIESGO

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Introduccion: Los procesos respiratorios crónicos descompensados son subsidiarios, con frecuencia, de ventilación mecánica invasiva que, sin embargo, no es posible en algunos pacientes debido al avanzado estado de su proceso de base.

Objetivos: Nuestro objetivo era determinar qué pacientes se benefician de la VMNI a su llegada al hospital así como las posibles variables que determinen el pronóstico a corto plazo de los mismos.

Metodologia: Se estudiaron consecutivamente durante 24 meses los pacientes con enfermedades respiratorias de base ingresados por descompensación de su enfermedad y que, cumpliendo criterios clínicos y analíticos para recibir ventilación mecánica, fueron desestimados para intubación orotraqueal por el estado avanzado de su enfermedad, recibiendo en su lugar VMNI mediante BiPAP.

Resultados: Se estudiaron 57 pacientes con una edad de 69.16 años (DE 13.67), 30 hombres y 27 mujeres. No existían diferencias significativas respecto a edad y sexo entre los fallecidos y los supervivientes. Los procesos de base de los pacientes eran: 34 EPOC y 23 NO EPOC (12 pacientes con patología toracógena y 11 con Síndrome de Obesidad-Hipoventilación). La mortalidad total del grupo fue del 14%. Sin embargo, los pacientes con EPOC tenían una mayor mortalidad que los NO EPOC (17.65% y 7.41%

respectivamente), aunque las diferencias no eran significativas. La proporción de pacientes portadores de OCD previamente a su ingreso entre los fallecidos (75%: 6/2) era superior a la de los supervivientes (42.86%:21/28) (p<0.05). La Odds Ratio de mortalidad para los pacientes ventilados que son portadores de OCD es de 4 (IC 95% 1.23-12,96). Tabla 1. Proporción de pacientes fallecidos portadores de OCD. OCD Supervivientes Fallecidos SI 21 6 NO 28 2 TOTAL 49 8

Conclusiones: 1. Los pacientes con descompensación por una enfermedad respiratoria crónica de base que reciben VMNI tienen una mortalidad del 14%, relativamente baja. 2. Dado el pequeño tamaño de la muestra, aunque las diferencias de mortalidad entre EPOC y NO EPOC no fueran significativas, sí pueden indicar una tendencia a una mayor mortalidad de los pacientes con EPOC, que duplica a la de los NO EPOC. 3. En los pacientes estudiados, ser portador previo de OCD supone un mayor riesgo de mortalidad, a pesar de recibir VMNI cuando sufren una descompensación de su proceso crónico de base.

CHRONIC OBSTRUCTIVE LUNG DISEASE (COPD) (II): VARIABILITY OF THE TREATMENT, ANTIBIOTIC USE AND QUALITY OF THE SERVICE

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Objectives: The purpose of this study was to analyse the variability of the treatment for the exacerbations in patients with COPD that visited the emergency department, to find out the use of antibiotics, and to determine the quality of the service received.

Patients And Method: Descriptive and retrospective analysis of 100 consecutive patients with COPD visited our emergency department for an exacerbation. This is characterized by increased dyspnea, increases in sputum production, purulence of sputum or any combination of these three symptoms. Clinical history review and filling-in of a questionnaire. Statistical analysis with the G-Stat 1.1 program.

Results: Three cases were excluded for filling in errors. The most common treatment was oral corticosteroids (56.97%), inhaled anticholinergic (60.24%) and short-acting beta-2 agonists (55.68%). Inhaled corticosteroids were recommended 29 times (35.37%) and antibiotics 75. Amoxicilin-clavulanic and levofloxacin (27.96% for each) were the most common antibiotics prescribed. 32% were taking some antibiotic when they visited, but 75.25% were discharged with them. 35 of 42 patients discharged (83.33%) received antimicrobial therapy and 28 of 46 admitted (60.87%). The most common antibiotic recommended for the three levels of service were amoxicilin-clavulanic in primary care (34.38%) and emergency (33.33%) and levofloxacin in hospitalization (26.09%). Only 1 patient of 9 attended (10.53%) returned to our department 7 days after discharge.

Conclusions: Salbutamol, ipratropium bromide, oral corticosteroids and amoxicilin-clavulanic or levofloxacin are the most commonly prescribed drugs. Most of the patients with exacerbations of the COPD received antibiotic therapy. An increasing number of levofloxacin over betalactamics is used as the complexity of the demand rises. The quality of the service received is high, as only a few of them came again once discharged.

VARIABLES AT EMERGENCY DEPARTMENT TRIAGE WHICH HELP THE CORRECT LOCATION OF PATIENTS PRESENTING WITH DYSPNEA

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Aims: To determine which variables could help at triage to locate patients who present dyspnea at appropriate level of care.

Method: Prospective study of 112 patients who presented with shortness of breath at the emergency department triage, with a pulse oxygen saturation (SpO2)>90%, initially located at level I (mild patients). Personal data, SpO2 by pulse oximetry, vital signs, brief medical history, and clinical follow-up were collected.

Results: Twenty-five patients wrongly located at level I were detected. They presented, compared to located well patients, with a lower SpO2 (95,6 ± 2,36% vs 96,8 ± 2,06%); p<0,01), higher respiratory rate (26,04 ± 4,59 breaths/min vs 22,13 ± 6,05 breaths/min; p<0,004), and temperature (36,91 ± 0,83 ºC vs 36,44 ± 0,56 ºC; p<0,01). More patients of the wrongly located group versus the well group had previous history of Chronic Obstructive Pulmonary Disease (COPD) [13 (52%) vs 21 (24,1%); p<0,008]. Logistical regression analysis was performed and showed that respiratory rate =24 breaths/min and temperature >37,5ºC were the best cut off points to assign patients to level II (seriously ill patients).

Conclusions: Respiratory rate, temperature and previous history of COPD are useful tools, in addition to SpO2, to locate patients who present with dyspnea in the triage emergency department.

NON INVASIVE MECHANICAL VENTILATION (NIMV) IN A LOCALLY BASED HOSPITAL

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Patients with chronic obstructive pulmonary disease (COPD) and respiratory acidosis who do not respond to conventional treatment form the group of patients who can gain most benefit from NIMV.

Objective: To evaluate the effectiveness of the treatment with a BIPAP system of MIMV in the A & E Department of an Area Hospital. Methods: Palamós Hospital has 100 acute beds and no ICU. Area covered > 100,000 inhabitants. The A & E Department attends more than 45,000 cases annually (approximately 2% are COPD) We have the use of S/T-D30 BIPAP NIMV equipment. We carried out an observation study from 1st January 2002 to 31st March 2003. Included in the study were all the patients with COPD with respiratory acidosis (pH<7.35) who had not improved with conventional treatment, excluded were those with severe encephalopathy (Glasgow<10), hemodynamic instability (TA<90mmHg), facial deformity, difficulty in regulating secretions and tracheotomy. In a total of 24 patients, the following parameters were considered: age, sex, functional state of COPD, acid-base equilibrium, on commencing the treatment, after one hour, 3 hours, 9 hours and 24 hours, with machine parameters (spon-

taneous type (S) and spontaneous/controlled (S/T), values of IPAP EPAP, leaks and respiratory volumes. We also evaluated the causes for the interruption of treatment, secondary effects, the total time of BIPAP and that elapsed prior to the first interruption.

Results: The average age of the group was 70 (85 – 43) 15 (62.5%) male and 9 (37.5%) female. Functional state I: 3 (12.5%); State II: 9 (37,5%); State III: 9 (37.5%) and without statistics 3 (12.5%) The average initial pH was 7.25 (+/- 0.05). The normalization of the pH (7.49) was obtained in 2 (8.3%) at the 3rd hour from the beginning of the treatment, in 7 (33.3%) at the 9th hour and in 15 (58.33%) at the 24th hour. The parameter of the machine most frequently used was the S type in 21 (87.5%) of the patients, with an average value of IPAP/EPAP of 11.4. The average of the leaks did not pass 171/min (+/-8.3) (N<30) and the average of the volumes was superior to 500 ml (+/- 281). The treatment was interrupted in 2 (8.3%), one for cardiac arrest and the other for intolerance. The most frequent secondary effects were facial skin injuries in 12 (50%), anxiety in 9 (37.5), abdominal distention in 4 (16.6%) and claustrophobia in one. The average treatment time with BIPAP was 26.4 h (+/-16.11) and the average time until the first interruption of the machine was 13h (+/-7.18).

Conclusions: The normalization of the pH is achieved in the first 24 hours, with an average total time of BIPAP that does not exceed 48 hours. We consider that this is a technique to be applied in an A & E Department of an Area Hospital with no ICU, with a good level of tolerance on the part of the patient and with few secondary effects.

APLICACIÓN DE LA TRAYECTORIA CLÍNICA DE URGENCIAS EN UN BROTE EPIDÉMICO DE NEUMONÍA POR LEGIONELLA

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Introducción: El Hospital de Mataró tiene un área de influencia de 230.000 habitantes, dispone en máxima ocupación de 330 camas de hospitalización y en el año 2002 atendió más de 109.000 urgencias. En nuestro hospital se utilizan las Trayectorias Clínicas de Urgencias (TCU) como metodología de trabajo, de tal forma que consigamos unificación de criterios asistenciales, respuesta rápida ante la sintomatología, autonomía profesional y trabajo en equipo. En agosto de 2002, se declaró en la ciudad de Mataró un brote de neumonía por Legionella que ha resultado ser uno de los más importantes de los registrados hasta la actualidad en nuestro país. Ante la sobrecarga asistencial que previsiblemente podría producirse ante un brote epidémico, un grupo multidisciplinar confeccionó una nueva TCU para "Sospecha de infección por Legionella" que se aplicó de forma inmediata por el equipo asistencial en zona de cribaje a partir del 4º día de declararse oficialmente.

Objetivo: Valorar la aplicación de la Trayectoria Clínica de Urgencias para "Sospecha de infección por Legionella" en el cribaje del Servicio de Urgencias (SU) de nuestro hospital, durante al brote que afectó a Mataró desde el 9 hasta el 31 de agosto de 2002.

Metodología: Revisiones de las TCU abiertas durante el brote epidémico ante la sospecha de Legionelosis. La TCU incluye: datos de filiación, confirmación de relación del enfermo con la zona afectada, sintomatología, constantes vitales, pulsioximetria, recogida de muestras de sangre y orina, hemocultivos y solicitud de Rx. Datos de la TCU formaron parte de un Registro General de Pacientes (RGP).

Resultados: - El RGP recoge desde el inicio del brote epidémico 144 casos de neumonía con sospecha de infección por Legionella atendidos en nuestro SU, de los cuales 108 casos son casos confirmados. - La TCU se aplicó a partir del 4º día de declaración del brote abriéndose un total de 148 procedimientos. - Se constató un 100% de cumplimiento de registros de la TCU. - Se ha comprobado que la TCU se aplicó (a partir del 4º día de declaración del brote) a 107 pacientes con neumonía, lo que significa la totalidad de pacientes afectados después de su puesta en marcha. La media de edad de los pacientes con neumonía a los que se aplicó la TCU fue de 52.9 años, el 67,3% hombres, el índice de ingreso fue del 62% y son 73 los casos confirmados microbiologicamente (68,2%).

Conclusiones: -Muchos de los registros de la TCU fueron incluidos en el RGP que ha proporcionado la valoración, tanto continuada como final, de la dimensión del brote epidémico de neumonía por legionella, que ha resultado ser por número de casos confirmados, el segundo registrado en España y el primero en Catalunya. - Pensamos que el completo cumplimiento de registros se debe al alto grado de sensibilización del personal ante una situación de presión asistencial y mediática. - La TCU para "Sospecha de infección por Legionella" ha resultado una herramienta eficaz para el cribaje y control de los pacientes en el Servicio de Urgencias. - La TCU ha permitido que en muchos casos el equipo facultativo haya realizado la valoración del paciente disponiendo de todos los resultados de las pruebas complementarias. Ha proporcionado respuesta rápida en el diagnóstico y ha favorecido el trabajo en equipo, disminuyendo la sensación de sobrecarga asistencial.

NONINVASIVE VENTILATION (NIV) AT THE EMERGENCY DEPARTMENT (ER) OF A UNIVERSITY HOSPITAL. TWO YEARS EXPERIENCE

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Objective and Methods: To describe our experience in the treatment of acute hypercapnic respiratory failure (AHRF) using NIV, over a two year period, between July/01 and June/03. A pressure ventilator "BIPAP QUANTUM" was used. We compared arterial blood gases before NIMV (C0), one hour after (C1) and 6 hours (C2) after the initiation of NIMV.

Results: We have applied NIV to 70 patients, mean age 72.9. 34 patients were diagnosed of COPD, 16 did not have a previous diagnosis and 20 had other diseases related to AHRF. Bronchial infection was the most frequently identified etiology of AHRF (25). 17 cases had no identifiable cause. 67.9 % of the patients were ventilated by a full facial mask, with a spontaneous/controlled mode as the most common ventilation system used (73.8%). IPAP and EPAP mean values were 14.74 and 4.93 cms H2O respectively. Mean baseline patient characteristics before NIMV, were: Breath Rate (BR) 32.6, Heart Rate (HR) 109.10 and Glasgow Scale (G) 13 (median). Arterial Blood pH 7.24; PCO2 87.53 and PO2 41.43 mm Hg. There was a significant improvement in pH and PCO2 values comparing C0, C1 and C2 whereas BR, HR and G could not be analyzed due to scarce recording of these data. C1: pH 7.30, PCO2 74.93. C2: pH 7.34 and PCO2 66.38. 54 patients continued on NIMV after C1; it was discontinued in 16 patients (3 due to intolerance, 1 due to Inten-

sive Care Unit criteria, 3 early corrections of respiratory acidosis and 9 failures of NIMV). 40 out of the 54 were still in the ER by C2; 28 continued on NIMV and it was discontinued due to correction of respiratory acidosis in 6 patients, 5 failures of NIMV and one due to intolerance. Overall NIMV was successful in 52 occasions (74.3%) and failed in 18 (25.7%). 15 (21.4%) patients died, but only 3 in the ER. 5 patients were admitted to Intensive Care Unit (3 patients needed orotracheal intubation).

Conclusions: 1- NIMV in the ER was successful in 74.3% of the cases. Considering that we treated severe cases of AHRF, we believe that our results are quite positive. 2- We think that the use of NIMV should be a part of the ER approach to cases of AHRF and thus constant training of this technique should be encouraged.

"SHORT STAY UNIT" DEPENDENT ON THE EMERGENCY DEPARTMENT: CREATION, PUTTING INTO OPERATION AND ANALYSIS

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Objectives: To analyse and describe the putting into operation of a Short Stay Unit (SSU) in a casualty department of a regional hospital.

Methodology: Transversal, observational and retrospective study of all the patients admitted consecutively to the new SSU over a period of three months. This unit has 8 single all-purpose beds and is managed by a specialist doctor from the casualty department.

Results: We included 495 patients. The average age was 62 ± 27.33 years with 54.7 % male and 45.3 % female. 71.9 % were patients admitted through Internal Medicine. The daily occupation and rotation rate was 70.3 %. The average stay was 24'48 ± 20 hours. Of the total number of patients admitted to the SSU: 54.9 % were there under observation ("SSU properly speaking"), and 45 % were there because of lack of beds, being considered as admitted to the ward ("awaiting a ward bed"). With respect to the destination upon discharge from the SSU, 47.5 % were definitively admitted to the hospital (this was indicated in the case of 72 % of these patients from the beginning) and 52.5 % of the patients were discharged: 38.5 % to their homes (86.4 % of these had been admitted for observation) and 14 % were transferred to another centre (this was initially programmed for 78.1 % of these patients). The percentages for those readmitted in less than 72 hours, between 3 and 30 days and > 30 days for patients who were discharged from the SSU were 0 %, 1.6 % and 0.5 % respectively, against those who were admitted to the ward which were 0.42 %, 3.8 % and 1.7 %, respectively (p = NS).

Conclusions: We would like to emphasize the result of the average stay, practically one day, which has been comparable to other kinds of units. The indication for admittance to the unit has been correct, making it possible to discharge from the hospital more than half of the patients who probably would have required admittance to the hospital wards, without an increase in patients readmitted. Over the period studied, the SSU has functioned as an observation unit, which is the reason it was designed and created, even though the possibility of using it as an area "while awaiting a ward bed" offers the casualty department a flexible drainage area, while offering the patient, medical, nursing and catering care which is more fitting, complete and comfortable.

DO REMINDER LETTERS INCREASE THE NUMBER OF INFORMED CONSENTS OBTAINED IN THE EMERGENCY DEPARTMENT?

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Objective: To evaluate the usefulness of a reminder letter sent to physicians in increasing the number of informed consents for blood transfusion obtained and appropriate specification in the medical orders in the Emergency Department (ED).

Methods: After sending physicians a letter reminding them to obtain the informed consent for blood transfusion and to fill medical orders, medical records of 84 consecutive patients who received blood transfusion in the medical area of our ED from December 1st of 1999 until March 28 of 2000 were reviewed. Data collected included age, sex, type of anaemia (acute or chronic), cause of anaemia, blood haemoglobin level, signs and symptoms after correcting volemia, risk factors, number of informed consents obtained, proper filling of medical orders and the number of units of blood given to each patient. Control group was a sample of 91 consecutive patients whose data was collected during the same period of the previous year. The results obtained were included in the letter sent to the physicians (residents and attending physicians) working at the ED. Patients data were compared using a t test with a significance criterion of $p < 0,05$.

Results: Ninety-nine patients received blood transfusions during the study period. Fifteen (15%) were excluded of the analysis because their medical records were not available. Control and study group were similar in regards to age, sex and cause of anaemia. Thirty-nine patients (46%) in the study group and 25 (27%) in the control group signed the informed consent for transfusion. Thirty-six patients (43 %) in the study group and 51 (56%) in the control group did not sign the informed consent. Written informed consent form could not be found in 9 medical records (11%) in the study group and in 15 (16%) in the control group. All these variables were significantly different between groups ($p < 0.05$). Fifty-eight medical records (69%) of the study group and in 73 (80%) of the control group had appropriate specification for blood transfusion in the medical orders, 18 medical records (21%) in the study group and 10 (11%) in the control group did not have such specification. Medical orders forms were missing in 8 medical records (9%) in the study group and 8 (9%) in the study group. These data were not significantly different between groups (p=0.09).

Conclusion: A remainder letter to ED physicians was effective to increase the number of written informed consents for transfusion obtained but did not improve the number of appropriate specification in the medical orders for blood transfusion.

A 24-HOUR AREA FACILITY AS AN ADDITIONAL UNIT TO THE EMERGENCY DEPARTMENT

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Because of the progressive increase of health care demands in the emergency departments, saturation and collapse of these services frequently occur. Saturation depends on three factors:

influx of patients, space dimensions, and mean patients' length of stay in the emergency department.

Objective: To assess the usefulness of a 24-hour area an additional facility the emergency department and to hypothesize on the dimensions of such area in a general teaching hospital.

Materials and methods: Candidates to be admitted to the 24-hour area were all patients who stayed for more than 12 hours in the emergency department and were discharged home. A retrospective study of the year 2002 in all candidates for being admitted in this new area was conducted. The mean length of stay for these patients and the average occupancy per day were calculated. Average daily occupancy (number of beds needed) was calculated by the following equation: Total length of stays in hours (mean stay · no. patients) Average daily occupancy = Study period (days) 24.

Results: Month No. patients Mean length of stay (hours) Average daily occupancy January 282 35.41 13.42 February 196 33.25 9.70 March 205 27.76 7.65 April 224 31.74 9.87 May 264 33.33 11.83 June 252 31.17 10.91 July 231 27.84 8.64 August 205 33.25 9.16 September 242 28.25 9.49 October 239 28.48 9.15 November 224 29.09 9.05 December 251 32.17 10.85.

Conclusions: To have available an additional 24-hour area facility to the emergency department is useful and improves the drain of patients in the emergency department. The dimensions of this 24-hour area should be estimated for each center, that in our paticular case, a space for 10 beds would be required.

INFORMED CONSENT: OPINIONS OF THE HEALTH CARE PERSONNEL FROM A TEACHING HOSPITAL

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Objective: To perform study of the ethical aspects of the opinions of the health care personnel on the information given to patients in order to obtain informed consent.

Methods: A total of 277 participants fulfilled an anonymous questionnaire of 20 items. The degree of knowledge of legal health care regulations on the patient's informed consent was assessed.

Results: 1.- Sample description: The most frequent age group was 25-34 years (42.2%). A total of 54.2 % of subjects were physicians, 31% registered nurses, 10.5% assistants/technicians, and 4.3% other occupations. With regard to years of practice, 32.1% had been practicing for 1-5 years, 22.4% for > 20 years, 19.5% for 11-15 years, 14.4% for 6-10 years, 8.7% for 16-20 years (not stated in 2.9%). Specialties of the participants included medical in 40.8% of cases, critical care (ICU and anesthesia) in 30.3%, surgical in 13.7%, and other in 15.2%. A total of 32.9% of participants had attended bioethical courses. 2.- Response to the survey: 45.1% of health care professionals believed that they had insufficient information on informed consent and when it should be completed. Four fundamental aspects should be included: information (96.7%), comprehension (93.5%), willingness (84.1%), and competence (74%). Other considerations included that informed consent is an instrument of professional protection against demands of the part of the user (81.2%), of difficult reading for the average person (76.2%), that information is not clearly explained to the patient (62.8%), and that sometimes contains excessive information (37.9%). Participants believed that side effects of a diagnostic or therapeutic intervention should be specified (98.9%), without percentages (59.6%), as well the likelihood of success (57%) and alternatives (79.8%). In respect to procedures for which informed consent should be included were only some non-invasive diagnostic maneuvers (lumbar puncture, 69.3% or thoracentesis 63.2%), all invasive procedures except for insertion of a central intravenous line (49.8%), all therapeutic interventions, and diagnostic/therapeutic interventions of questionable effectiveness (52%).

Conclusions: - A large percentage of health care professionals were unaware of what informed consent is, its different parts, the law that regulates it, and the philosophy under the instrument was developed. - Opinions were plural and many times, paternalistic. - In order to solve the problem of the lack of knowledge of informed consent, continuing education promoted by the ethical committees is urgently need to attain a change of the traditional paternalistic model to an autonomic model of respect to the freedom and individuality of each patient.

INTEGRAL PROCESS FOR THE CARE OF ILL-TREATMENT

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In the report of the World Health Organization of September 2000, it is recognized that violence is one of the major public health problems around the world. The European Parliament in 1986 recommended to the state members a series of measures and actions to fight against ill-treatment. The CatSalut in 2001 had included among its quality objectives, a compromise for the early detection of ill-treatment situations that are considered a health problem. The City Council of Barcelona started an operative plan against women's violence 2001 - 2004. Because of worry and social alarm, particularly among health care personnel, the direction of the Municipal Institute of Health (IMAS) established a Technical Commission of the IMAS for the ill-treatment care.

Objective: To present the protocols and algorithms for the detection and the plan of action for ill-treatment care developed by the Technical Commission of the IMAS.

Methods: A Technical Commission for ill-treatment care was established by the IMAS, which was made by an interdisciplinary working team both of health care professionals and non-health care professionals from all IMAS centers. The general objective of the commission is to develop different protocols and algorithms for the detection and care of ill-treatment, as well as the diffusion, implementation, and sensitization of the problem at the levels of both users and staff of the different IMAS centers. Bi-monthly meetings had been performed (nine meetings) in which different subjects of the daily agenda had been discussed and agreements concluded.

Results: Development and consensus of integral protocols for the detection and care of ill-treatment in children adolescents, women, and elderly. Development and registration of an anatomical map of lesions and/or judicial communication. Development of algorithms for the detection and plan of action in case of ill-treatment as a poster. Development of information posters and triptyches on the resources available for women in case of ill-treatment for their distribution and exposition in all IMAS centers. Introduction of the program of an emergency course for IMAS residents. At the present time, protocols and algorithms are being implemented.

Conclusions: We believe that implementation of these resources will be an important technical incentive for the need of establishing a common framework, which would allow to

organize in a coordinated manner all health care and medico-legal action plans in relation to this phenomenon.

PAPEL DEL SERVICIO DE URGENCIAS EN LA HOSPITALIZACION DOMICILIARIA: UN VALOR AÑADIDO A LA ASISTENCIA HOSPITALARIA EN EL DOMICILIO

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Objetivo: Se decide valorar, tras algo más de 4 años de funcionamiento, el nº de pacientes hospitalizados a domicilio que han necesitado en algún momento de su ingreso asistencial en el Servicio de Urgencias (SU), el nº de retornos y los beneficios que se hayan podido derivar. Metodologia: Estudio retrospectivo que abarca desde el 16 de noviembre del 98, fecha en que se implementa la Unidad de Hospitalización a Domicilio (UHD) en nuestro hospital, hasta el 31 de diciembre del 2002, donde se valora el nº de pacientes ingresados en régimen de hospitalización domiciliaria (HD) que tuvieron que ser atendidos en el SU, así como el nº de retornos (vuelta al hospital), las causas que los motivaron, las patologías prevalentes implicadas por orden de frecuencia, el Servicio de procedencia de los pacientes y los beneficios de la colaboración asistencial del SU con la UHD.

Resultados: Durante el período estudiado se dieron 795 altas: 547 procedían de MI, 197 del SU, 31 de Cirugía Vascular (CV), 8 de Neumología (PN), 3 de la Unidad de Corta Estancia (UCE), 3 de Traumatología (COyT), 2 de Cardiología (CARD), 1 de Consultas Externas (CCEE), 1 de Cirugía General (CG), 1 de Oncología y 1 del Domicilio. 45 pacientes (5:66%) fueron visitados en el SU: 30 de MI (66.6%), 13 del SU (28.9%), 1 de CG (2.22%) y otro de CV (2.22%). En este período se indicaron 54 retornos al hospital (no todos fueron visitados previamente por el SU): 41 procedían de MI (76% del total). De estos 41 pacientes, 21 lo decidió el médico del SU (51.2%) y 20 el de la UHD (48.8%); 11que procedían del SU lo indicó el médico del mismo servicio SU (4%); 1 de CARD (1.85%) y otro de PN (1.85%) retornaron directamente desde la UHD. De los 54 retornos, 31 (57.4%) eran broncópatas, 15 (27.7%) cardiópatas, 7 (12.9%) con un proceso infeccioso y 1 (1.85%) hepatópata. Causas de retorno: 24 por empeoramiento (44.4%), 6 por claudicacione del cuidador (11.1%), 5 por deseo del paciente y/o familiar (9.26%), 18 por nuevos problemas no controlables en el domicilio (33.3%) y 1 por malos cuidados (1.85%). Por sexo: 28 mujeres y 26 hombres (=1.07) con una media de 74.5 años y rango 44-91. Indice de retornos 54/795 (6.79%): MI 41/547 (7.5%), SU 11/197 (5.58%), CARD 1/2 (50%), PN 1/8 (12.5%). Fallecieron 3 de los pacientes (5.55%) que fueron devueltos al Hospital: 1 en el SU durante un procedimiento, y los otros 2 en MI al cabo de pocos dias. El 91% de los retornos asistidos en el SU admitieron estar muy satisfechos con la celeridad con que recibieron asistencia y el 74% afirmaron que volverían a ingresar en régimen de HD.

Conclusiones: Hemos podido comprobar que un 5.66% de los ingresados en HD ha sido atendido en algún momento en el SU dando lugar a 45 visitas efectuadas y 31 retornos al Hospital, lo que demuestra la necesidad de contar con la colaboración del SU para asegurar una asistencia continuada y con garantías suficientes. Por otro lado cabe destacar que una gran mayoría de los cuidadores ha sabido utilizar de forma correcta el SU, tal como se les había instruido. El dato de que claudicaron más los cuidadores de los pacientes procedentes del SU (3/11: 27.27% vs 3/41: 6.66% de MI) se debe probablemente a que los pacientes, cansados de tantas horas en el SU, sin posibilidad inmediata de cama y con sensación de mejoría, desean ir a casa convenciendo al cuidador que, una vez allí,se siente desbordado. Por último, llama la atención el alto grado de satisfacción y el porcentage aceptable de pacientes (74%) que respondieron que estarían dispuestos a reutilizar la HD por la sensación de seguridad y atención recibida cuando se sintieron mal, atribuyéndolo a la rapidez con que fueron atendidos y a la buena evolución de su proceso.

EL SERVICIO DE URGENCIAS MAXIMO PROVEEDOR DE LA HOSPITALIZACION DOMICILIARIA EN EL HOSPITAL DE MATARÓ: UNA REALIDAD

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Introduccion: El Hospital de Mataró tiene una área de influencia de 230.000 habitantes, dispone en época de máxima ocupación de 330 camas de hospitalización y en el año 2002 se atendieron 109.000 urgencias. A finales del 1998 se creó la Unidad de Hospitalización Domiciliaria (UHD), que inicialmente se orientó al paciente hospitalizado, cuyo proceso agudo está en fase de estabilización pero que requiere todavía medidas asistenciales hospitalarias. Por iniciativa del Servicio de Urgencias (SU), se creo una comisión para estudiar la viabilidad y establecer un protocolo que permitiera ingreso directamente desde SU a UHD.

Objetivo: Valorar la evolución en la utilización de la UHD por parte de SU en relación al resto de servicios hospitalarios. Metodologia: Estudio descriptivo de los pacientes ingresados en UHD desde el año 1999 hasta el 2002, analizando por periodos anuales la procedencia al ingreso en UHD del SU y del resto de servicios hospitalarios, analizando además variables socio-demograficas y los grupos de patología prevalentes.

Resultados: En el año 1999 se ingresaron en la UHD 10 pacientes procedentes de SU (5% del total) y 184 (95%) de las Unidades de Hospitalización Convencional (UHC). El balance hasta la actualidad es progresivamente favorable al SU, registrándose en el año 2002 un total de 81 ingresos (49% del total) procedentes de UHC y 84 ingresos (51%) procedentes directamente del SU. La edad media de los pacientes procedentes del SU en el año 1999 es de 76,3 años con un rango de 66 a 90 y proporción hombre/mujer de 4/1. En el año 2001 la edad media es de 60,9 años con un rango de 16 a 99 y proporción hombre/mujer = 1. Por grupos de patología mientras que en el año 1999 desde SU ingresaron básicamente pacientes respiratorios crónicos reagudizados (9 de los 10 casos), en el año 2002 ingresaron 84 pacientes con los siguientes grupos de patología: 35 reagudizaciones de EPOC, 2 TBC pulmonar, 40 infecciones febriles de vía urinaria, 7 trombosis venosas profundas, 3 insuficiencia cardíaca y 1 fractura de pelvis.

Conclusiones: A pesar de la finalidad inicial de la UHD, el SU ha aumentado progresivamente el número de ingresos en esta Unidad, resultando ser actualmente el principal proveedor de los ingresos domiciliarios. El SU integra rápidamente cualquier alternativa que de solución a sus problemas endémicos, como la falta de camas de ingreso hospitalario convencional. Es objetivo prioritario del SU, potenciar y colaborar con la gestión integral del problema de camas hospitalarias. Desde los SU debemos seguir buscando y colaborando en nuevas alternativas al ingreso hospitalario

convencional: UHD, Hospital de día, utilización de camas de Residencias Geriátricas asistidas en periodos invernales coordinadas con hospitales de agudos y sus SU, acceso a la gestión de visitas preferentes (48-72h) en Dispensarios de Especialistas Hospitalarios, coordinación y colaboración eficaz con los Centros Atención Primaria.

HERIDA CARDÍACA POR ARMA BLANCA: TORACOTOMÍA EXTRAHOSPITALARIA

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Introducción: La introducción de técnicas agresivas en la Emergencia extrahospitalaria permite ofrecer a los pacientes la última oportunidad de salvar su vida, estas técnicas agresivas que siempre han sido patrimonio del hospital, se pueden realizar fuera de él, su introducción permitirá la demostración en el futuro de esos resultados positivos.

Objetivo: Demostrar que la toracotomia de urgencias se puede realizar en la Emergencia extrahospitalaria, como única alternativa en pacientes con PCR por afectación cardiaca penetrante. Caso clínico · Varón de 59 años. · Cinco heridas penetrantes en tórax. · Situación de PCR. · Inician maniobras de RCP según procedimientos confirmando que al menos una de ellas tiene afectación cardiaca. · Se exploran las heridas del tórax manualmente, confirmando que al menos una de ellas tiene afectación cardiaca. · Se valora conjuntamente entre los facultativos la realización de toracotomia. Decidiendo ante la situación del paciente(PCR que no revierte con maniobras habituales) realización de la misma. · Se inicia apertura de tórax a los 6 - 7 minutos de iniciadas las maniobras de reanimación. · Durante la realización de la técnica de toracotomía para evacuación del taponamiento cardiaco y sutura de la probable herida cardiaca, se realiza por parte de uno de los autores un video de toda la actuación. Realizada la toracotomía, se confirma que hay una herida cardiaca de grandes dimensiones, que se intenta suturar, obteniéndose una sutura precaria de la aurícula y ventrículo derecho por falta de medios, así mismo el paciente fallece a consecuencia de otras heridas torácicas que fueron imposible controlar. Se presentará la grabación de dicha técnica mediante video.

Conclusiones: La Toracotomia como técnica de aplicación en la Emergencia extrahospitalaria, es una técnica de fácil aplicación precisando un entrenamiento previo no demasiado amplio y es la última oportunidad que se le puede ofertar a un paciente que presenta una PCR por herida penetrante en tórax con afectación cardiaca. Si es fundamental contar con material adecuado y personal que sepa moverse dentro de un campo quirúrgico.

TRANSPORTE INTERHOSPITALARIO NEONATAL

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Emergencias, Osakidetza,Servicio, Vasco De Salud

Objetivo: Analizar la actividad de Transporte Interhospitalario Neonatal (TIN) en el 2002 en la Comunidad Autónoma de Euskadi. Realizar un estudio de esta actividad con cada recurso, y revisar los procedimientos de asignación, áreas de cobertura, y las necesidades materiales para dar una respuesta más eficaz y eficiente. Revisar el registro de este tipo en los Centros de Coordinación (CC)

Metodo: Análisis retrospectivo descriptivo de las actuaciones recogidas como TIN (143) durante el 2002. Revisión de la Dotación de medios: Incubadora de Transporte y calor, ventiladores, monitores

Resultados: Las Ambulancias Medicalizadas (9) realizan actividad primaria y Transporte Interhospitalario. Una se encuentra localizada y se dedica prácticamente en exclusiva a Transporte Interhospitalario(E102).Es el recurso que realiza la mayor parte de los TIN interterritoriales. De los 143 registros analizados, no siempre se cumplimentan todos los campos estipulados y faltan campos cuya explotación aportaría información muy valiosa. La distribución de los TIN en los meses del año es homogénea aunque es llamativa la bajada de este tipo de actividad en febrero y agosto. La distribución por días es homogénea. La distribución por horas depende del tipo de Hospital que solicita el Transporte. Las peticiones de los primarios es homogénea a lo largo de todo el día, en los secundarios las peticiones tienden a concentrarse entre las 09 y las 20 horas. La agrupación de motivos de TIN por aparatos ofrece los siguientes resultados: apto. respiratorio (24,5%), apto. cardiovascular (18,9%), apto. digestivo (18,2), prematuidad-bajo peso(9,1%),etc.). Los tiempos de respuesta se incrementan por la necesidad de recoger material necesario (incubadora) para el Transporte en Bilbao o Mendaro.

Conclusiones: Las demandas de TIN vienen caracterizadas por el tipo de Hospital(primario, secundario o terciario) que las realiza, el destino viene condicionado por el tipo de patología. La respuesta a la demanda a los hospitales viene condicionada por el tipo de patología, por los medios necesarios para el transporte y de la ubicación de dichos recursos. Hay que revisar los registros de los CC, a fin de que aporten una mayor y mejor información. Hay que dotar de más material de Transporte a los diferentes recursos, para mejorar la respuesta.

PACIENTES CRÍTICOS ATENDIDOS POR SAMUR-PROTECCIÓN CIVIL: CONCORDANCIA DIAGNÓSTICA CON HOSPITAL RECEPTOR

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Introducción. La implementación de los servicios de emergencia médica prehospitalario (SEMP), ha supuesto una disminución importante de la morbi-mortalidad, lo que ha contribuido a un gran avance en la salud pública. Los profesionales en vía pública, con condiciones adversas de situación, climáticas, sociales y con medios limitados, actúan con celeridad, pues de su intervención eficaz puede depender la vida del paciente. Esto dificulta el emitir un diagnóstico definitivo preciso. El paciente crítico, estabilizado, se transfiere al hospital, donde los facultativos hospitalarios actúan en un medio mas idóneo y con los recursos que le permite un dispositivo asistencial fijo, emitiendo finalmente un diagnóstico definitivo.

Objetivos. Determinar la concordancia diagnóstica entre los ámbitos prehospitalario y hospitalario y conocer la supervivencia de estos pacientes al alta hospitalaria. Material y métodos. Descriptivo transversal-longitudinal retrospectivo. Emplazamiento: SAMUR PC. Ayto de Madrid y Hospitales Receptores. Selección de la población: pacientes que durante los años 2001- 2002 recibieron asistencia sanitaria y fueron trasladados mediante preaviso hospitalario. Tamaño muestral: estimación muestral con proporción de grado de acuerdo

esperado del 50%, precisión del 3%, un nivel de confianza del 95%, para lo que se estimaron necesarios 617 pacientes. Muestreo aleatorio simple, proporcional al número de pacientes asistidos por los diferentes hospitales. Sesgos: de sospecha diagnóstica que no invalida el estudio. Variables: sociodemográficas, tiempos, motivo de ingreso, diagnóstico emitido por SAMUR P.C. y Hospital (CIE.9 MC), supervivencia. Aspectos éticos. Confidencialidad de los datos. Recogida, proceso y análisis de datos: se diseñó una hoja de recogida de datos y se revisaron las Historias Clínicas de ambos ámbitos. Base de datos en Access 97 para Windows NT profesional.. Estadístico: mediante SPSS V.10.0. calculo de Indice de Kappa (k).

Resultados. Se estudiaron los 107 pacientes que conforman el tamaño muestral del 2º centro hospitalario en frecuentación, 89 (83,2 %) varones y 18 (16,8 %) mujeres (p< 0,01). La edad media para varones fue 47,04 años (DE:18,78) con IC del 95%, 43,05 –51,02 y para la mujeres de 46,67 años (DE:27,96) con IC del 95%, 32,77- 60,58, no significación estadística entre la edad media según los sexos. El rango de edad de 89,25 años (0,98-90.23). Motivo del ingreso por enfermedad en 43,9 %, accidente de tráfico 30,8%, agresiones 15,9%, accidente casual 5,7% y autolisis 3,7%. Diagnósticos mas frecuentes corresponden a traumatismos, seguido de enfermedades del sistema circulatorio. La concordancia diagnóstica ha sido muy alta K= 0, 90; IC del 95%, 0,85 - 0,95. La estancia media al alta hospitalaria fue de 15,83 días (DE 22,14) que para los supervivientes fue de 21,09 días (DE 23,97). La supervivencia al alta hospitalaria fue del 63,6% y fallecidos el resto, de los cuales 41 % mueren tras estancia mayor de 48 horas.

Conclusiónes. La muy alta concordancia diagnóstica obtenida y la supervivencia de pacientes con un elevado potencial de mortalidad "in situ" derivada de su gravedad, ha de servir de estímulo para seguir impulsando una atención sanitaria de calidad. Es imprescindible generar nuevos canales de comunicación directos entre los sistemas de emergencias prehospitalario y hospitalario así como la interrelación de sus profesionales, para favorecer la investigación, cuyo objetivo último es mejorar la intervención sanitaria, responsabilidad con los pacientes que es compartida entre ambos niveles asistenciales.

INFLUENCIA DE LOS CUIDADOS PREHOSPITALARIOS EN LA SUPERVIVENCIA DEL TRAUMA PEDIÁTRICO GRAVE

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Introducción: En nuestra sociedad el trauma es la principal causa de muerte en la niñez. Objetivo: Analizar la asistencia sanitaria de los niños traumatizados graves realizada por unidades de soporte vital avanzado (USVA) de un servicio de emergencia prehospitalaria de Madrid (SAMUR- PC) y la supervivencia en los 7 primeros días.

Metodología: Descriptivo retrospectivo de la asistencia a niños traumatizados graves de 0 a 16 años desde enero de 1999 a julio de 2002. Variables: edad, etiología, constantes iniciales, puntuación inicial en la Escala de Coma de Glasgow (GCS),Trauma Score Revisado(RTS) e Índice de Trauma Pediátrico (PTS), cuidados, tiempo de asistencia, patología principal y supervivencia a las 6, 24 horas y 7 días. Análisis estadístico con SPSS.

Resultados: Se atendieron 80 niños. La edad predominante fue de 12 a 16 años (46,25%). Los accidentes de tráfico (60%) fueron la causa más frecuente y el TCE la lesión principal (38%). Recibieron oxigenoterapia 78, precisando 30 de ellos intubación orotraqueal. Se colocaron 6 sondas gástricas y 2 drenajes torácicos. Se canalizó al menos una vía venosa periférica a 77 y una vía central a 2. Un 70% recibió analgesia intravenosa y un 21,3% otro tipo de fármacos. Al 81,3% les fue colocado un collarín cervical añadiendo otros dispositivos de inmovilización y/o movilización en un 80% de casos. Tiempo medio de asistencia in situ de 00:27:06 (DE:00:11:23). El PTS medio fue de 6,60 (DE:3,71) y el RTS medio de 6,77 (DE:1,56). El GCS fue < 9 en 22 casos. Supervivencia a las 6 y 24 horas del 93,7% y a los 7 días del 90%. Diferencia significativa entre los valores medios de los tres índices y la supervivencia a las 6 y 24 horas y a los 7 días (p< 0.001).

Conclusiones: Una atención inicial rápida y de calidad por los equipos de emergencia prehospitalaria es fundamental para lograr la mayor supervivencia posible sin secuelas. Los índices de severidad calculados son buenos predictores de supervivencia en niños traumatizados graves.

ESTRATEGIA PREVENTIVA EN EL PERSONAL DE EMERGENCIAS DEL TRASTORNO DE ESTRESS POSTRAUMÁTICO

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SAMUR-P.C. es un servicio de emergencias prehospitalario de Madrid ,en el desarrollo de su actividad tiene que enfrentarse a incidentes críticos. Su personal está expuesto en mayor medida que otros profesionales a esos "incidentes críticos"(fallecimiento de niños; perder a una víctima después de un socorro prolongado etc.). Situaciones con alto potencial de impacto psicológico provocando en la mayoría de las ocasiones síntomas de estrés agudo. Dicha reacción habrá de tener un seguimiento que evite su derivación en crónica, lo que podría originar la instalación del Trastorno de Estrés Postraumático (TEPT), cuadros ansioso-depresivos y somatizaciones. La Revista interna del SAMUR, CLAVE 20, se constituye como un canal eficaz y directo a la hora de hacer llegar mensajes a los trabajadores.

Objetivos: Configurar y difundir el Debriefing como técnica preventiva para el TEPT. Buscar nuevos canales de comunicación que favorezcan el autocuidado como elemento eficaz de protección en la prevención de riesgos laborales.

Material y método: Revisión bibliográfica para dimensionar la situación actual del TPET y su prevención mediante el Debriefing Psicológico. Se utilizó Clave 20 para su difusión.

Resultados: El Debriefing no esta extendido en el personal de emergencias en este país. La intervención, a través de la estructuración de la experiencia traumática cognitiva y emocional, pretende evitar la cronificación de síntomas de estrés agudo y detectar a las personas que puedan necesitar ayuda psicológica especializada. Se desarrolla en dos sesiones, la primera entre las 48-72 horas después del suceso y la segunda entre las 6 u 8 semanas. Fases: I.- se presentan los objetivos y normas del grupo. II.-Reconstrucción del suceso evitando la retraumatización. III.- Abordar los pensamientos que Detectar ideas que pudieran cronificar la victimización, culpa y ansiedad. IV.- Ser consciente de las emociones asociadas. V.-Fase de intercambios donde el grupo pasa a ser un factor de apoyo social, de alivio y tranquilidad. También tiene objetivo de normalizar los síntomas y proponer tareas para ir integrando

lo sucedido. VI.- Poner un punto y final al suceso. VI.I- Conclusión donde se resume la sesión Se ofrece la disponibilidad de apoyo intersesiones. La técnica no es una psicoterapia, sino que está basada en principios de la intervención en crisis. La revista CLAVE 20 se repartió en mano a todos los trabajadores. La tirada es de 2.000 ejemplares.

Conclusión: Importante adoptar mediadas preventivas que eviten las consecuencias adversas de la cronificación de síntomas ante incidentes críticos, por el un alto sufrimiento psicológico,deterioro en la calidad del trabajo y alta conflictividad interpersonal. Es una estrategia eficaz conseguir que la promoción de la salud adquiera la categoría de "noticia".

TRANSFER IN HELICOPTER WITH INTRA AORTIC BALLOON COUNTERPULSATION

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Introduction and objectives: Every day is more frequently in a service of sanitary helicopters the requests for movements of critical patients that carries technology, complicated or of great volume, essential for their survival, because of the time of movement of these patients should be the shortest. The objective of this review is to verify that the B.C.I.A can be transferred in helicopter for weight and measurements, does not alter his functioning because of the height, interferences with the avinica, sensibility to the vibrations and compatibility of the battery. It is necessary to assure that the patient will support during the transport a suitable level of care.

Methods: Two cases are checked of retrospective form, they were moved in helicopter model Dauphine, both patients carrying Intra-aortic Balloon Counterpulsation, one from Santiago and another one from Vigo. We have revised the indications and contraindications of the above mentioned device, the weight, type of battery, complications, the pathologie of the patients transferred and the distance from the hospital transmitter to the receiver (time of transfer). In both cases the hospital of destiny was Juan Canalejo of A Corua, the motive of transfer wsas that both patients were entering program of cardiac transplant for cardiogenic shock after coronary isquemia.

Results: The size and weight of the console did not suppose a problem because of the characteristics of the helicopter used in both movements. Interferences were not produced with the instruments of flight and met affected neither by the vibrations nor the variations of pressure. The purge of the ball was produced in two occasions without problems. In one of the devices the battery ends before concluding the transfer for not being in good conditions of maintenance. Both patients were kept stable during the time that lasted the transfer.

Conclusions: The transfers of patients with this type of electromedical device is possible and sure in a type medium helicopter, with the limitations of space that this generates, they tolerate well the vibrations and don't alter the instruments of flight. It is necessary to have always clear that it is necessary to to know the duration of the battery and insure that the device has been connected to the current up to the moment of the transport, the personnel of transport will know the managing of the device. There must be a rapid guide of use. To have current to 220V in the airship would expand the possibilities.

LA EFICACIA DEL USO DE OCREOTIDE COMPARADO CON SONDA DE BALONES SENGSTAKEN-BLAKEMORE ENE. TRATAMIENTO DE PACIENTES CON SANGRADO DE TUBO DIGESTIVO ALTO SECUNDARIO A VARICES ESOFAGICAS

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El sangrado de tubo digestivo alto secundario a varices esofágicas en nuestro medio es causa frecuente de ingreso a nuestros servicios de urgencias, De los pacientes con Sangrado de Tubo Digestivo Alto por varices esofágicas y presentan cirrosis tienen el 50% de probabilidades de resangrado, tienen una prevalencia en el sexo masculino 2-1. Se atendieron 40 pacientes, 25 hombres y 15 mujeres, se hicieron dos grupos, grupo 1 Tratamiento con ocreotide 14 hombres y 7 mujeres, y en el grupo II, tratamiento con sonda de balones 11 hombres y 8 mujeres, el rango de edad fue entre 37 a 97 años, con edad promedio de 60 años. De los pacientes atendidos en nuestro estudio, presentaron inestabilidad hemodinámica en la primera hora del grupo 1 11 pacientes, y del grupo ll 16 pacientes. Pacientes que tardaron en controlar el sangrado menos de 3 horas, del grupo 1, 19 pacientes, del grupo ll, 11 pacientes. Pacientes que tardaron en controlar el sangrado mas de 3 horas fueron, del grupo 1, 2 pacientes, del grupo ll, 6 pacientes, Los resultados fueron los siguientes, R:0.79 (IC:0.52-1.20), Chi-cuadrada: 0.95, valor de P, 0,32 los cuales no tienen un valor significativo estadísticamente. Pacientes que sangraron al tercer día, grupo 1 2 paciente, grupo ll, 6 pacientes, Pacientes que sangraron al quinto día grupo 1 cero, grupo ll, 2 pacientes, Ningún paciente presento sangrado a los 15 días de su inicio de tratamiento al estudio.

Tiempo promedio de estancia en el servicio de medicina interna fue de 8 días, todos los paciente presentaron datos de insuficiencia hepática y se clasificaron en Child A, 16 pacientes, Child B 16 pacientes y Child C 4 pacientes. Los resultados de endoscopia en los 40 pacientes fueron de acuerdo a la clasificación de Sheila-Sherlof:, grado 1, 12 paciente, grado 2, 14 pacientes grado 3, 10 pacientes, grado 4, 4 pacientes. El estudio se realizo en las primeras 24 a 72 horas de ingreso del paciente. Se presentaron 3 defunciones dos de ellas ene. Servicio de urgencias, ambos del grupo 1, tratamiento con ocreotide ambos tenían grado 4 de varices esofágicas, grado 4 de clasificación de la hemorragia. La tercer defunción perteneció al grupo 1 tratamiento con sonda de balones, y falleció al tercer día en el servicio de urgencias, con diagnostico de síndrome hepato renal, y resangrado de tubo digestivo alto. Tratamiento para el grupo l: Ocreotide 50 mcgr en bolo, posteriormente, 50 mcgr por hora en infusión por 5 dias Grupo II. Sonda de balones Sengstaken-Blakemore.

Conclusiones: Pacientes grupo 1, tratamiento con ocreotide, en la primera hora disminuyo el sangrado y se controlo su estabilidad hemodinámica antes de las tres horas. Pacientes grupo II, tratados con sonda de balones, observamos mayor sangrado e inestabilidad hemodinámica en las primeras 3 horas de ingreso. Demostramos que el uso de ocreotide:

1.- En la primera hora disminuyo el sangrado,
2.- Es eficaz en el control de hemorragia aguda de tubo digestivo alto por varices esofágicas sin causar toxicidad,
3.-Se controlo el sangrado en las primeras 24 horas de ingreso.

EPIDEMIOLOGÍA DEL SÍNDROME LATIGAZO CERVICAL (SLC). PRESENTACIÓN DE 669 CASOS

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Objetivos: Estudiar el perfil y la gravedad de 669 pacientes con diagnóstico de Síndrome del Latigazo Cervical (SLC) atendidos en el Área de Traumatología del Servicio de Urgencias del Hospital de Basurto (Bilbao).

Material y Métodos: Estudio prospectivo y descriptivo de 669 casos de cervicalgias pos-traumáticas atendidas en nuestro Servicio de Urgencias en el periodo de tiempo comprendido entre el 1 de enero y el 30 de junio de 2003. Criterios de inclusión: pacientes con dolor cervical por alcance tras accidente de tráfico. Criterios de exclusión: Pacientes politraumatizados. Antes de iniciar el trabajo confeccionamos una hoja de recogida de datos donde registramos las siguientes variables: Edad y sexo, día de la semana, accidente urbano o en carretera, conductor o pasajero, uso de cinturón de seguridad, mecanismo (alcance posterior, lateral o frontal), clínica asociada, exploración (puntos dolorosos a la palpación, contractura muscular, movilidad, fuerza muscular, ROT y sensibilidad), hallazgos radiográficos (a todos los pacientes se les realizo Radiografía de columna cervical 2p + funcionales) y clasificación según la Escala de Quebec (tabla 1).

Resuldados: Las cervicalgias post-traumáticas representaron el 3,50% del total de urgencias traumáticas atendidas en nuestro servicio (19.241 pacientes). La edad mínima fue de 4 años y la máxima de 71 años. La distribución por edades y sexos queda reflejada en el Gráfico 1. La distribución por días de la semana fue un 14% (92 casos) los lunes, un 12% (83 casos) los martes, un 19% los miércoles (125 casos), un 11% (76 casos) los jueves, un 18% (119 casos) los viernes, un 11% (72 casos) los sábados y un 15% (102 casos) los domingos. El 59% fueron accidentes urbanos (397 casos) y el 41% accidentes de carretera (272 casos). En un 58% de los casos el paciente conducía (373 casos), el 28% eran pasajeros delanteros (178 casos) y el 16% pasajeros traseros (98 casos). En un 69% de los casos afirmaron llevar cinturón de seguridad (461 pacientes). El mecanismo lesional se expone en el Gráfico 2. El 34% de los pacientes (226 casos) presentaron sintomatología acompañante a la cervicalgia. Los signos clínicos y la exploración los exponemos en el Gráfico 3 y 4 y los hallazgos radiológicos en el Gráfico 5. En nuestra casuística sólo encontramos un caso de subluxación C4-C5 y una fractura- luxación C 6-C 7. La clasificación según la escala de Quebec queda expuesta en el Gráfico 5.

Conclusiones: El SLC supone una patología frecuente en el Área de Traumatología de nuestro Servicio.

1. Mayor incidencia en varones, conductores y en edades comprendida entre 21 y 30 años.
2. La mayoría de los accidentes son urbanos sin diferencias significativas en el día de la semana.
3. Más de la mitad de los accidentados (69%) afirmaron llevar cinturón de seguridad.
4. El alcance posterior es el mecanismo lesional más frecuente (50%).
5. Además del dolor cervical, presentaron síntomas acompañantes más de 1/3 de los pacientes.
6. El dolor paravertebral con y sin limitación de la movilidad fue el signo clínico más relevante.
7. En cuanto a la gravedad de la lesión la mayoría fueron Grado II de Quebec (87%).
8. En nuestra casuística el porcentaje de lesiones graves (fracturas y luxaciones cervicales) ha sido baja (2 casos).

SERVICIOS DE URGENCIA HOSPITALARIOS Y DE ATENCIÓN PRIMARIA: PUNTO DE VISTA DEL USUARIO

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Objetivo: Se pretende averiguar si los usuarios del sistema sanitario español están informados de los servicios que presta cada estructura asistencial, de donde deben acudir cuando les surje un problema sanitario determinado, de cual es su opinión sobre la calidad asistencial que ofrece cada estructura, así como de si son conscientes del problema asistencial derivado de la mala utilización de los medios sanitarios existentes.

Metodología: Para ello se desarrolla una ficha encuestatoria con 12 preguntas cerradas. La muestra poblacional se cierra con 300 usuarios encuestados. El estudio se realiza en Logroño, capital de la Comunidad Autónoma de La Rioja.

Resultados: El 41% de la muestra afirma no saber que existen centros de salud que ofrecen asistencia sanitaria de urgencia las 24h del día. El 67% afirma no saber distinguir que patología es susceptible de asistencia sanitaria urgente, y evidentemente ante la duda el 97% acude a los servicios de urgencia. El 71% cree que la asistencia sanitaria de urgencia es de "mucha mayor calidad" para cualquier patología en servicios hospitalarios, comparándolos con la asistencia que prestan los servicios de atención primaria. El 91% es consciente de la saturación de los servicios de urgencia hospitalarios, y el 83% de ellos opina que la solución es ampliar los servicios de urgencias hospitalarios.

Conclusión: La evidente saturación de los servicios de urgencias hospitalarios está directamente relacionado con la mala utilización de estos por parte de los usuarios. Los ciudadanos no tienen por qué saber realizar un autotriaje; esto desborda las urgencias hospitalarias. Es imprescindible una adecuada política informativa hacia los ciudadanos, mediante campañas públicas que ayuden a optimizar la utilización de los recursos existentes, potenciando la atención primaria.

REVERSIBLE MYOCARDIAL DYSFUNCTION, POSSIBLE COMPLICATION IN CRITICALLY ILL PATIENTS WITHOUT HEART DISEASE

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Objective: Reversible myocardial dysfunction (RMD) or myocardial stunning is frequently described in patients with episodes of acute coronary syndrome and has recently been reported in critically ill patients without ischemic heart disease. The present paper aimed to study and describe the possible existence of RMD among critically ill patients in our setting who present without an acute episode or history of cardiovascular disease.

Design: Prospective, descriptive study. Setting: The intensive care unit (ICU) of a district hospital. Patients and partici-

pants: The study included all patients admitted to the ICU from March 1998 to March 2001 without heart disease or history of heart disease but who presented with RMD associated with the cause of ICU admission.

Measurements and Results: Transthoracic and transesophageal echocardiography were carried out to assess left ventricular ejection fraction (LVEF) and any segmental contractility disturbances. These investigations were carried out within 24 hours of admission, during the first week, during the second or third week, after one month and after three to six months. We assessed the electrocardiogram (ECG) on admission and changes over time. Thirty-three patients were included, with a mean age of 61.2±14.3 years. Seven patients died. The initial LVEF was 0.34±0.12 and improved with time. Segmental contractility disturbances were observed in all patients initially and also normalized with time. All patients presented with ECG changes that normalized in line with the echocardiographic changes.

Conclusions: In our setting, RMD occurred in critically ill patients without primary heart disease. This syndrome is associated with systolic dysfunction, segmental contractility disturbances and electrocardiographic changes. Although a worsening of the clinical course may be inferred, the degree of its effect on the prognosis of the primary pathology is unknown. The etiology and pathology of RMD is unknown and it may correspond to a pathophysiological response inherent to the critically ill patient.

REVERSIBLE SEVERE ACUTE MITRAL INSUFFICIENCY DURING AN ACUTE PNEUMONIA

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Objective: To describe an unusual case of pneumococcal pneumonia complicated by completely reversible cardiogenic shock. This complication arose due to the development of a myocardial systolic dysfunction associated with alterations of segmental contractility and the onset of severe mitral insufficiency.

Design and setting: Clinical case report. Setting: Intensive care unit of a district hospital.

Conclusions: Mitral insufficiency and myocardial dysfunction are recognized complications of severe pneumonia that may affect the prognosis. The complication reported here may represent the failure of an organ in the context of a multiorgan dysfunction secondary to the pneumonia. A further aspect of particular interest is the value of echocardiography carried out in intensive care units in patients with severe shock.

BACTEREMIA IN PATIENTS DISCHARGED FROM THE EMERGENCY DEPARTMENT

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Objectives: We have analysed patients who have had an HC, paying special attention to the evolution of those who are discharged from the emergency department.

Methodology: A descriptive, retrospective study has been conducted, based on the case-history of patients with positive HC performed in Emergency Department over a period of a year. The diagnosis, responsible germs, their resistance to treatment, together with whether the initial diagnosis or treatment has had to be changed, has been evaluated.

Results: HCs have been performed on 870 patients in Emergency Department, at least one in 94 showing positive results, giving a percentage of 10.8 %. Of 87 patients with bacteremia, 52 presented alteration of basal condition or immunodeficiency, and all except 3 were admitted. Of the 35 patients without basal alteration, 22 of them were discharged. The most frequent diagnosis was urinary infection, followed by pneumonia and infection of soft tissue. The process progressed towards a septic condition in 18 cases, 10 of urinary origin and 5 of abdominal origin, none of them had been sent home from Emergency Department. The germ most frequently isolated has been E. Coli, followed by Pneumococcus and Staphylococcus Aureus. Antiobiotics most frequently prescribed are, in this order, Amoxicillin-clavulanate, Ciprofloxacin and Ceftriaxone. Resistance to the initially prescribed antibiotic treatment has been detected in 5 cases. As a consequence of the process, 8 patients died, all of them admitted to our centre or to another to which they were transferred.

Conclusions: Even though the existence of bacteremia is an unfavourable sign, we believe that patients in an overall good state of health and without any debilitating illnesses, who undergo an HC and in whom an aggressive evolution of the infection is not to be expected, may be discharged with monitoring by their doctor and control appointments, as long as there is a quick means of contact in case of bad evolution or if the result of the HC and the antibiogram suggests that this is necessary. Given the low cost-effectiveness of the HCs performed, it remains to be evaluated whether they are the most indicated procedure.

RELATIONSHIP BETWEEN TIME TO ECG ACQUISITION AND ADVERSE CARDIAC COMPLIANCE WITH GUIDELINES FOR DOOR TO ECG TIME IN PATIENTS WITH UNSTABLE ANGINA AND NON-ST ELEVATION MYOCARDIAL INFARCTION

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Background: Guidelines for the management of unstable angina (UA) and Non-ST segment elevation myocardial infarction (NSTEMI) recommend that an electrocardiogram (ECG) be obtained within 10 minutes of arrival to the emergency department (ED).

Objective: To describe compliance with the 10-minute guideline, to identify factors that lead to delays in ECG acquisition, and to evaluate the influence of time to ECG on outcomes.

Methods: We calculated the door to ECG time for patients included in a prospective registry undifferentiated chest pain patients presenting to the ED. Logistic regression was used to assess which factors associated with ECG acquisition, and to evaluate the influence of time to ECG on the occurrence of any MI or death within 90 days of the visit.

Results: There were 7,887 patients meeting inclusion cri-

teria accounting for a total of 8,885 ED visits between 1 June, 1999 and 1 October, 2001. Of eligible patients, 1249 (16%) had UA/NSTEMI with 31.8% receiving an ECG within 10 minutes. Only a history of coronary artery disease significantly increased the likelihood of getting an ECG within 10 minutes of arrival (OR 1.38, 95% CI 1.1-1.7). Increasing the time to ECG by ten minutes was associated with an increased risk of MI or death within 90 days of the visit (OR 1.031, 95%CI 1.002 1.066) in the UA/NSTEMI population.

Conclusion: Only one third of patients with UA/NSTEMI received an ECG within the 10 minutes. Increasing the time to ECG was associated with an increased risk of death or MI.

MYOCARDIAL CONTRAST ECHOCARDIOGRAPHY (MCE) FOR THE DETECTION OF MYOCARDIAL ISCHEMIA: A NEW APPROACH FOR EMERGENCY MANAGEMENT OF ACUTE CORONARY SYNDROME?

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Background: Actually, risk stratification is mandatory in patients with acute coronary syndrome to identify patients who will benefit from early invasive therapy. Clinical and biochemical markers are helpful and are usually used to stratify therapy. However, rise of troponin level may not occur until 4-8 hours following start of chest pain. Thus a method able to monitor regional myocardial perfusion would be worthwhile and could be useful for earlier risk stratification.

Aim: a pilot study was performed to test the agreement between MCE and myocardial scintigraphy (99mTc-Sestamibi-SPECT) in the evaluation of myocardial perfusion on segmental level during pharmacological stress.

Methods: MCE (Optison, 8-10 ml/h) was performed at rest and during peak dipyridamole stress in 70 unselected patients (age: 63±9; gender: 54m, 16f; infarcts: 25 anterior, 10 inferior, 11 lateral; coronariopathies: 10 single, 32 multi vessel) with angiographically proven coronary artery disease undergoing SPECT imaging for clinical reasons. 4 patients were excluded because of extremely limited echographic windows. From 4- and 2-chamber MCE and comparable SPECT views, 12 myocardial segments were graded for regional opacification/uptake (0=absent, 1=low, 2=incomplete, 3=complete, 4=indeterminate) by two pairs of blinded observers. Segmental ischemia was defined as a reduction of opacification/uptake under stress by one degree. Concordance between MCE and SPECT and interobserver variability were assessed using kappa statistics.

Results: Of 792 analysed segments 143 were not adequate for reading by MCE, mostly confined to basal segments. Interobserver variability was good (kappa=0,76). Overall agreement between the two methods was poor (59%, kappa =0,25) when including unreadable segments but good (82%, kappa=0,63) when excluding those segments. Concordance on segmental level was highest in apico-lateral (85%) and lowest in basal segments (18%). Concordance between the methods was higher for diagnosing fixed defects (72%) and normal perfusion (88%), than for diagnosing reversible defects (65%).

Conclusion: This study demonstrates that real-time MCE can detect perfusion defects during pharmacological stress and agrees reasonably well with 99mTc-Sestamibi-SPECT. MCE confirm his theoretical potential to diagnose microvasculature obstruction. According to his quickly availability this method could be proposed as first line for earlier risk stratification in ACS.

MISSED DIAGNOSIS OF ACUTE CORONARY SYNDROME IN PATIENTS PRESENTING TO THE EMERGENCY ROOM WITH CHEST PAIN

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Timely correct diagnosis of acute coronary syndrome (ACS) in the emergency room (ER) is imperative. Serum cardiac markers are expected to increase accuracy of ACS diagnosis in the ER.

Purpose: To assess and characterize missed diagnosis of ACS in patients who presented to the ER with chest pain and were discharged with a diagnosis of non-cardiac chest pain.

Methods: The protocol for diagnosing ACS at Hadassah Ein-Kerem Medical Center (Hadassah EK) includes medical history, and ECG and serum troponin T on admission and after 6 hours of observation. ER charts of patients who presented with chest pain and discharged between 20.1 and 28.4.2001 were reviewed. ER medical staff members were unaware of the study. Demographic and clinical details, blood examinations and ECG interpretation were recorded. Two cardiologists blinded to the study protocol also evaluated the ECG recordings. A month after discharge the patients were interviewed by phone.

Results: Two hundred ninety five charts of 293 patients were reviewed. Two hundred forty four patients were interviewed by phone. Four cases of missed diagnosis were found (1.64%; 95% confidence interval, 0.53-4.43%): 1 died at home, 1 was diagnosed by ambulatory thallium scan as suffering from coronary disease, and 2 returned to the ER and underwent cardiac catheterization that demonstrated coronary disease. Three of the 4 missed cases were not managed by the routine ER protocol. Due to their small number, common characteristics of patients with missed diagnoses could not be found.

Conclusions: The rate of missed diagnoses of ACS at the ER of Hadassah EK is very low, similar to the 3% recently published. Serial Troponin T measurements is efficient for diagnosing ACS in the ER but not faultless.

LEFT ARM SWELLING

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Case: A 25 year old male, right hand dominant, physically active textile engineer presented to the emergency department (ED) with a complaint of left arm swelling, pain and mild numbness. He had increasing pain in this left arm for the last 6 days and he became aware of swelling the day before presentation. He had not had any heavy effort or trauma to his arm recently and had no similar episodes in the past. At the physical examination the patient appeared to be in good health. His vital signs were within normal limits and his temperature was 37.1 0C. His left arm was obviously tensely swollen from the hand to the shoulder. The superficial veins of the arm

were distended. The upper arm and forearm were tender to palpation. The patient stated that he had worse shoulder and arm pain with active and passive movement. Radial and ulnar pulses were palpable at the wrist. The circumferential measurements of the upper arms at the mid-level of the biceps muscle revealed 5 cm difference (33 cm right versus 37 cm left). Color flow venous doppler imaging revealed complete obstruction of the left subclavian vein by thrombus. Left brachial, axillary and internal jugular veins were patent. After the diagnosis, anticoagulation therapy with unfractioned heparin was initiated intravenously, with a bolus dose of 5000 U, followed by 1000 U per hour infusion. Systemic thrombolysis with Streptokinase 250,000 U bolus followed by an infusion at 100,000 U per hour was administered intravenously via the ipsilateral cutaneous vein.

Thrombolytic treatment was continued for 30 hours. After the start of treatment, the patient's signs and symptoms gradually improved. The patient was discharged on oral anticoagulant therapy after the sixth day of admission without any complication, sequele or relapse at five month follow-up.

Discussion: Deep venous thrombosis of the upper limbs can be classified into primary and secondary types based on the etiopathogenesis. Primary upper-extremity deep vein thrombosis (UEDVT) so-called Paget-Schroetter Syndrome or idiopathic UEDVT is a rarely seen (2 per 100 000 persons per year). Patients with Paget-Schroetter syndrome develop spontaneous UEDVT after strenuous occupational and sporting activity such as linotype operating, painting, cheerleading, rowing, wrestling, weight lifting, baseball pitching, or hanging curtains. Primary UEDVT occurs most commonly in young otherwise healthy men, although both sexes and all age groups may be affected. It appears more often in the right arm, probably because this is the usual dominant limb and hence is involved most frequently in strenuous activity. The patients with systemic congenital and acquired hypercoagulable states, such as a protein S, protein C, and antithrombin III deficiency, pregnancy, lupus, malignancies, or nephrotic syndrome are prone to UEDVT. Secondary UEDVT develops in patients with central venous catheters, pacemakers, or cancer, and accounts for most cases of UEDVT. UEDVT has been reported in up to one fourth of patients with these catheters. The initial symptoms of this disorder include swelling, pain, numbness, malaise, bluish discoloration, cyanosis, and prominence of the cutaneous veins of the upper limbs. On physicial examination arm and hand edema, venous engorgement, a palpable cordlike mass, supraclavicular fullness, or jugular venous distension may be noted.

The most serious and potential life-threatening complication of UEDVT is pulmonary embolism (PE). Up to one third of patients with UEDVT have PE. PE originating from UEDVT has been reported to cause 10 to 15 percent of PE's, especially if associated with indwelling central venous catheters. Diagnosis of UEDVT should be confirmed or excluded with imaging studies. Although contrast venography represents the gold standard for the diagnosis of UEDVT, ultrasonographic techniques are the prefebable initial diagnostic imaging tests in the emergency setting. Ultrasonographic techniques are noninvasive, easily available, costsaving and can be repeated periodically. Contrast venography is invasive and can aggrevate thrombosis or cause phlebitis. Venography should be reserved for the patients who had negative ultrasound findings with high clinical suspicion of UEDVT. Treatment options for UEDVT include local or systemic thrombolysis, anticoagulation, surgical thrombectomy or combination of these regimens.

Thrombolytic therapy produces more rapid resolution of symptoms, restores venous patency early, and reduces the risk of post-thrombotic syndrome. However, bleeding complications are more frequently seen with systemic thrombolysis plus anticoagulation treatment regimen than with anticoagulation alone . Thrombolytic therapy is indicated in otherwise healty primary UEDVT patients. Thrombolytic therapy aslo should be considered in UEDVT patients complicated with massive or submassive PE and extensive thrombosis progressing to phlegmasia cerulea dolens that may cause extremity loss.

Patients with secondary UEDVT are often not candidates for thrombolysis, so conservative treatment with anticoagulation alone is generally recommended. Local, catheter guided thrombolysis can be an alternative that achieves higher rates of complete clot resolution with lower doses of medication and reduces the risk of serious complications compared with systemic thrombolysis. Anticoagulation is indicated in patients with primary and secondary UEDVT.

OUTCOME OF DIFFERENT PHARMACOLOGICAL TREATMENT STRATEGIES IN PATIENTS WITH NON ST-SEGMENT ELEVATION ACUTE CORONARY SYNDROMES MANAGED BY A CHEST PAIN UNIT

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To assess outcome in NSTEACS receiving different pharmacological treatment strategies, we enrolled 189 consecutive patients (pts; mean age 70 y, 47% female, during 2002 y) with definite NSTEACS. All pts received recommended anti-ischemia treatment and aspirin; in addition they were randomised to receive: Tirofiban plus Clopidogrel (group A); Clopidogrel (group B); Clopidogrel plus Statin (group C). End points were coronary events (CE; composite end point including angina, AMI, stroke, and death) at 48h, 7 days, and 3 months. Each group had similar baseline characteristics and enrolled 63 pts. Overall CE occurred at 48h in 17(9%) pts: 6 pts group A; 5 pts group B; 6 pts group C (P=n.s.). CE occurred at 7 days in 31(16%) pts: 10 pts group A; 11 pts group B; 10 pts group C (P=n.s.). CE occurred at 3 months in 46(25%) pts: 14 pts group A, 16 pts group B, 16 pts group C (P=n.s.). Of note, hard events (AMI, stroke and death) were detected as follows: 0% in group A as compared to 2% group B (P=n.s.) and 0% group C (P=n.s.) at 48h; 0% group A versus 10% group B (P=.001) and 3% group C (P=n.s.) at 7 days; and 0% group A versus 10% group B (P=.001) and 3% group C (P=n.s.) at 3 months.

Data showed a significantly lower incidence of hard events in group A versus group B at 7 days and 3 months. However, incidence of hard events were similar in groups A and C. Finally, 55(29%) pts underwent angiography and 38 (20%) pts underwent angioplasty as follows: 16 pts group A; 6 pts group B; 16 pts group C.

In patients with NSTEACS, short-term hard events had a significantly lower incidence in pts treated with Tirofiban plus Clopidogrel as compared to pts treated with Clopidogrel or Clopidogrel and Statin. Overall cumulative CE did not vary among groups. However, a larger number of pts and a long-term follow-up are needed to assess this finding.

INTERMEDIATE-RISK ACUTE CORONARY SYNDROMES WITHOUT ST-SEGMENT ELEVATION: A COST/EFFECTIVE MANAGEMENT STRATEGY IN THE EMERGENCY DEPARTMENT.

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To assess safety, efficacy and costs of CPU management of intermediate-risk NSTEACS in a public welfare health care system,210 patients (pts; mean age 71 y; male 61%, 2000-2001 y) with definite NSTEACS and TIMI risk score ³ 3 admitted to a large community-based hospital were randomised to receive CPU or conventional management; 105 patients in each group. Baseline characteristics were similar in both groups. All pts received recommended anti-thrombotic and anti-ischemia treatment on presentation, including IIB/IIIa receptor blockers.

End points were use of resources and a triple composite end point including angina, non fatal myocardial infarction and cardiovascular death were compared between the two groups, during in-hospital stay and at 6-month follow-up. Occurrence of the composite end point was similar in pts managed in CPU and conventional CCU, either during in-hospital stay (28% versus 26%, respectively; p=n.s.) and at 6 months (17% versus 16%, respectively; p=n.s.). The overall hospital stay was similar in both groups. CPU patients less frequently underwent revascularisation procedures (32% versus 57%; p=.002). Overall, CPU pts had a 22% reduction in full costs of hospitalisation as compared to conventional CCU management (9,913 Euro versus 12,056 Euro; p=0.01). This gain was particularly relevant (29%) when patients with TIMI risk score ≤ 4 were compared to patients with TIMI risk score > 4 (10,599 Euro/patient versus 13,699 Euro; p=0.004). In a public welfare environment, CPU care of intermediate-risk NSTEACS with TIMI risk score ≥3: 1) is a safe and cost/effective alternative to conventional CCU management, particularly for patients presenting with TIMI risk score ≤ 4; 2) could represent an useful tool for optimising admissions to CCU by early selection of patients with higher TIMI risk score (>4) and/or effective clinical instability; 3) should allow an optimal use of cath lab resources and dedicated cardiologists.

EFFECT OF METHYLENE BLUE ON INDUCIBLE NITRIC OXIDE SYNTHASE: EXPRESSION IN ACUTE LUNG INJURY INDUCED BY PARAQUAT

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The purposes of this study was to determine the inhibitory effect of methylene blue (MB) on lipid peroxidation, the production of nitric oxide (NO), and the gene expression of NOS in acute lung injury induced by paraquat, and the dose dependent effect of MB. After single intraperitoneal injection of paraquat (20 mg/kg), rats were divided into four groups: control group, paraquat treated group, paraquat with low dose MB (2 mg/kg) treated group, and paraquat with high dose MB (20 mg/kg) treated group. MB was administered via the jugular vein 1 h after paraquat administration, and animals were sacrificed at 6 and 24 h. Compared with the paraquat treated group, the paraquat with MB treated groups showed mild lung histology, not significant decreases in lung MDA contents, significant increases in lung GSH contents at 24 h, and significant decreases in plasma NO concentrations, and slight decreases in NOS gene expression at 6 and 24 h.

The high dose MB treated group showed a significant increase in lung GSH content, a significant decrease in plasma NO concentration, and relative decrease in NOS gene expression compared with the low dose MB treated group. In conclusion, MB showed the inhibitory effect on plasma NO concentration and the expression of NOS mRNA, and increase in antioxidant effect in the lung injury induced by paraquat. The inhibitory effect of MB on lipid peroxidation and the dose dependent inhibitory effect were partially shown.

NON INVASIVE POSITIVE PRESSURE VENTILATION (NIV) IN SEVERE COMMUNITY ACQUIRED PNEUMONIA (CAP)

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Background: NIV is the treatment of choice in selected patients with acute respiratory failure, especially COPD pts. NIV efficacy in severe hypoxaemic respiratory failure remains controversial.

Objective: to assess the efficacy of NIV (added to standard medical therapy) in pts with severe CAP, with reference to endotracheal intubation (ETI), gas exchange and mortality. Study design:prospective observational. Methods: in 16 months, 20 pts were treated with NIV for severe CAP (mean age 71.1±16.5). Inclusion criteria: multiple lobar involvement, PaO2/FiO2 < 250 in FiO2>0.5,respiratory rate (RR) > 25,severe respiratory distress. NIV was delivered through a face mask. PSV was started at 10 cmH2O and increased to reach a Vte 6-8 ml/kg and to decrease RR. PEEP was started at 5 cmH2O and increased to obtain SpO2 > 92%, with a maximum value of 12 cmH2O. Failure was defined as the need for endotracheal intubation and mechanical ventilation.

Results: we divided the population in two subgroups: success group (SG-13 pts) and failure group (FG-7 pts). The two populations were homogenous for clinical physiological parameters at the beginning of the treatment. Mean duration was 44±42 hours and 38.7±23.2 in SG and FG respectively (p=NS). In the SG a significant improvement after 1 hour of treatment was observed in the following parameters: PaO2/FiO2 (98.5±4 to 173.3±85.6,p=0.009), RR (34.1 to 25.3,p<0.001), heart rate (HR) (114 to 101,p=0.016), SpO2 (81.3 to 95.7,p<0.001). No changes were observed in the failure group. All pts that underwent NIV survived, while, of the 7 pts that required invasive ventilation, 3 died for septic shock.

Conclusions: NIV, delivered by face mask, may result in early improvement of physiological parameters. Lack of improvement after 1 hour of treatment may be considered a negative prognostic factor for NIV success; if after 1 hour of treatment no improvement is observed endotracheal intubation and mechanical ventilation should be carried out as soon as possible.

ASTHMA IN THE WESTERN REGION OF SAUDI ARABIA

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Introduction: Asthma is a relatively common disorder which affects nearly 5% of the US population and is quite common in the Kingdom of Saudi Arabia. Asthma has been associated with poverty in the US. Deaths resulting from asthma are relatively uncommon but have continued to rise in the last few decades worldwide. The prevalence of asthma was studied in school children in Jeddah in 1992. This indicated that asthma and hay fever were more common amongst siblings and offspring, supporting the inheritance hypothesis amongst Saudis.

Objective: To assess the incidence and severity of asthma in the adult population of Saudi Arabia, as well as the use of clinical guidelines for the management of these patients.

Methods: This is a retrospective study where the medical records of 304 adult patients attending respiratory clinics at King Khalid National Guard Hospital, Jeddah were reviewed. Various traits were accounted for in this study, including gender, age, severity of asthma, family history and measurements emphasised by the Saudi guidelines for asthma management.

Results: The results were based on a data sample of 158 male and 146 female patients. The majority of patients presenting with severe asthma were within the 25-30 year old age group. The vast majority of these did not require hospital admission because of their asthma. It was noted that more than 95% of patients had been assessed in accordance with the Saudi guidelines for the management of asthma.

Conclusions: This study found that asthma is a common problem affecting a wide range of people living in the Western Region of Saudi Arabia. The results indicated that the disease presents in a familial inheritance fashion and does not decipher between social class. The treatment at this particular hospital was found to be very much optimal and in accordance with the Saudi National Guidelines for the management of asthma.

A COMPARATIVE STUDY OF ASTHMA IN THE WESTERN REGION OF SAUDI ARABIA AND THE WEST MIDLANDS OF UK

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Introduction: Asthma is a common disease seen in the Western Region of Saudi Arabia and the West Midlands in the UK. Deaths are relatively uncommon as a direct result of being asthmatic, but the death rate continues to rise worldwide despite a better understanding of the disease and medication. This increase is often attributed to inadequate assessment and treatment of the disease. Guidelines are in place for the management of asthma in the UK as well as in Saudi Arabia.

Objective: To compare the diagnosis and management criteria used in a sample of patients in both Saudi Arabia and the UK. Methods: This is a retrospective study based on the medical records of 304 cases of asthma seen at King Khalid National Guard Hospital, Jeddah and a similar number reviewed at City Hospital, Birmingham. The diagnostic and management criteria was noted for each of these patients and compared with the latest asthma guidelines available in Saudi Arabia and the UK.

Results: The results showed that in the UK the vast majority (99.2%) of patients had at least one observation recorded out of four recommended by the guidelines (peak expiratory flow, O2 saturation, chest examination and respiratory rate). In Saudi Arabia this figure was very similar (99.4%). It was noticed that in the UK all four observations were recorded in 17% of patients whilst in Saudi Arabia this figure was 26%.

Conclusions: This study showed that although guidelines were being followed in both Saudi Arabia and in the UK, they were not being implemented as well as they could be. The results indicated that guidelines were followed better in Saudi Arabia than in the UK. This could be a reflection of better awareness of the Saudi guidelines, more stringent protocols and easier access to forms based on the guidelines.

HISTOPATHOLOGIC LUNG CHANGES FOLLOWING ENDOTRACHEAL ADMINISTRATION OF AMIODARONE IN AN ANIMAL MODEL

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Objective: To determine if amiodarone administered endotracheally (ET) causes acute microscopic lung tissue damage.

Design: Pilot prospective observational animal study of 3 dogs and 2 pigs approved by the Institutional Animal Care and Use Committee. Setting: Summa Hospital Surgical Research Center. Subjects: 3 dogs and 2 pigs of similar size, weight, and age were anesthetized with sodium pentobarbital, intubated and placed on a ventilator. They were then given 3mg/kg amiodarone diluted into 4cc of normal saline as part of a research study to determine absorption. One dog received double the dose (6 mg/Kg).

Observation: The animals were kept on a ventilator while used for non-interventional research purposes. Three hours later, the animals were euthanized and the lung tissue harvested and grossly evaluated. The right lungs were inflated with 10% formalin through the bronchi and the left lungs sectioned at 2cm intervals. Both lungs were then fixed with 10% formalin for 48-64 hours and sections from each lobe were taken and stained with H&E for microscopic evaluation. Main Outcomes: Observation of acute lung damage was evidenced by pulmonary edema, congestion, vascular thrombi, and intra-alveolar fibrin deposition and by neutrophilic infiltration of bronchi, bronchioles and alveoli.

Results: Gross examination showed lower lobe congestion in all samples. The pig's lungs showed segmental areas of lower lobe atelectasis. Microscopic examination showed consistent evidence of acute lung injury.

Conclusion: ET administration of amiodarone does cause gross and microscopic changes suggestive of acute lung injury. It is not known if these changes are transient or reflect an irreversible or long lasting insult to the lung tissue. Further work is needed to determine this

ASSESSEMENT OF THE SEVERITY OF COMMUNITY-ACQUIRED PNEUMONIA (C.A.P) IN EMERGENCY DEPARTMENT BY THE FINE'S SCORE*

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Pneumonia is a frequent infectious cause of emergency consultation, adjusted physician's decision may avoid some excessive hospitalization. **Objectives:** Determine the seriousness of C.A.P seen at the emergency department (ED). Analyse the emergency physician's decision. **Methods:** a cohort study of patients received at an ED of a general teaching hospital, whose the main diagnosis is a C.A.P. We calculate the Fine's Score and analyse their place of hospitalization and outcome at 30 days. Results: 115 C.A.P are seen at the ED in one year. 70 men and 45 women. the main results are on the table 1:

Fine's Score Category		1	2	3	4	5
Number		5	28	22	47	13
Hospitalization	2	19	20	44	13	
Checking-out		3	9	2	3	0
Intensive care Unit	0	0	4	22	7	
Death (30 days)	0	0	1	8	2	
				4.5%	17%	5%

Discussion: CAP in ED are serious (71% are among categories 3, 4 and 5). All deaths are among categories 3 , 4 and 5. Orientation of the patients of the categories 3, 4 and 5 is in relation to the seriousness but there is an excessive hospitalization of the categories 1 and 2. Conclusion: As it is correlated to the seriousness, Fine's score seems usefull to help emergency physicians to decide the hospitalization of C.A.P.

*Fine MJ et al. N. Engl. J. Med 1997, 336:243-50

"NEW" U.S. PARAMEDIC CURRICULUM IN A TWO-TERM FORMAT

STOY WA

University of Pittsburgh Center for Emergency Medicine

The Center for Emergency Medicine was the home for the creation of all the EMS national standard curricula throughout the 1990's. Most recent was the paramedic program. Following the pilot testing of the revised curricula the Center believed that the program could be offered in two-term format. Dr. Stoy will present the results of this new format. The pro's and con's of such an undertaking will be presented to those seeking to implement this type of instruction.

AN OVERVIEW OF THE EMS EDUCATION AGENDA FOR THE FUTURE

STOY WA

Department of Transportation; National Association of EMS Educators; University of Pittsburgh; Center for Emergency Medicine

Following the completion of the Educational Agenda for the Future there was a need to explain how it was developed and more importantly, how it should be implemented. Dr. Stoy represented NAEMSE on the development of this monumental tool for EMS. He will talk about the history of the development and how one should view the tool for assisting in the improvement of EMS education.

TEMPERATURE, LIGHT, DRUGS AND AMBULANCES

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Pharmacopoeia and the laws offer regulations about the temperature for storing drugs (2 classes: 4- 8 °C and 15-25°C). Our aim was to determine the storage conditions in MICU and our ambulances and their potential affect on drug efficacy.

Method: We recorded the temperature of the drug boxes inside the vehicles during 1 year (thermometer "TESTOSTOR"). We also conducted a bibliographic review and interviewed manufacturers.

Results: Even though we are in a temperate area, for more than half the year we recorded temperatures that were greatly outside the tolerated limits. The lowest were as low as -5°C and the highest more than 40°C. We discovered daily variations (thermal shocks) of more than 20°C. Manufacturers have certified the instability of several drugs under unsuitable temperatures, even more so under repeated thermal shocks. We were not able to determine the safe limits of exposure to unsuitable storage conditions. Manufacturers cannot warrant for drugs that are stored in inadequate conditions. Literature is poor in studies concerning drug degradation due to storage temperature. Some studies assess rapid degradation of some drugs of high interest in our field: epinephrine may be degraded in 1 week with loss of biological activity. This offers an interesting point of view on several studies regarding epinephrine in cardiac arrest. With permanent air conditioning (during driving and parking) and a well-regulated refrigerator we have been able to measure very stable temperatures during the last 2 years.

Conclusion: The drug storage in MICU and the ambulances is clearly inadequate and may cause clinically significant modification of drugs. This result may well involve the legal responsibility of the prescribing doctors. It now seems unavoidable for us to install permanent air conditioning units in our vehicles; one driven by the engine while driving, another working on AC while the vehicle is parked, and a well regulated refrigerator. If in doubt, just measure your temperatures.

COMPARISON OF OBSERVED VERSUS PREDICTED INTERVENTION TIMES OF MOBILE INTENSIVE CARE UNITS

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In Belgium the EMS consists of a two-tiered system with EMT-staffed ambulances and hospital-based, physician-staffed mobile intensive care units (MICU's).As the Belgian Ministry of Health funds a limited number of 81 MICU's, the optimal geographical distribution of the departure sites of these 81 MICU's needed to be determined taking in account that the

largest possible part of the Belgian population should be reached within 10 minutes and the smallest possible part over 15 minutes.For that purpose a Geographic Information System (GIS) was used as GIS allows to calculate the time needed to reach a location, taking in account road characteristics and speed limits.

Aim: Validation of the GIS by comparing the predicted and observed MICU intervention times (IT).

Methods: For all interventions of the MICU of the University Hospital of Ghent between January 1 and June 30, 2001 the time between departure from the hospital and arrival on scene was taken from a prospective registry (observed IT).The GIS model calculated for all interventions the theoretical IT (predicted) and travel distance.

Results: The table shows the observed and the predicted IT (minutes, mean ± S.D.) of 1262 available MICU interventions as a function of the travel distance, expressed per 5 km:0-4.99km,n=387,obs=5.3 ± 2.4min,pred=3.1 ± 1.2min**;5-9.99km,n=426,obs=8.1 ± 2.4min,pred=6.0 ± 1.3min**;10-14.99km,n=193,obs=10.9 ± 3.1min,pred=10.0 ± 1.8min**;15-19.99km, n=133,obs=13.0 ± 2.7min,pred=13.3 ± 1.9min;20-24.99km,n=92,obs=15.0 ± 3.6min,pred=15.9 ± 1.8min*,25-30km,n=31,obs=19.7 ± 5.6min,pred=18.9 ± 1.4min. * P<0.05 and **P<0.005, Student T-test. The IT fell within the 10 minutes and 15 minutes limits in 60% and 88% of the observed versus 73% and 90% of the predicted cases.

Conclusion: The difference between observed and predicted intervention times with a GIS is relatively small for distances of 10 or more kilometres. These data should also be obtained for all other Belgian MICU's in order to assess the effectivity of GIS in the prediction of optimum departure sites.

EMERGENCY MEDICINE IN PORTUGAL. WHY?

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Background: Unlike many other countries, Emergency Medicine is not a medical specialty in Portugal. However, the Portuguese Medical Society does recognize that the increase demand in the Emergency Hospital Departments should be accompanied by a specific technical formation of human resources, especially of those in the Emergency Room.

Objective: The patient's clinical heterogeneity necessitates the existence of a special medical team trained in managing all those situations is needed. The formation of Emergency Medicine Departments with emergency medical doctors is the solution to this problem. Method: Review of 30 months of services performed by the Pre Hospital Emergency Medical Team (PHEMT) of the S. Francisco Xavier Hospital.

Results: In this period 5,612 patients were assisted by the PHEMT and more than 70% (3,928) were older than 36 yrs old. Male patients were more common than women (68% vs 32%). Medical conditions were more prevalent with 4,147 observations (73.9%) including cardiovascular disease (1,834), neurological (568), respiratory (710), Cardiopulmonary Arrest (425), GI bleeding (121), metabolic (210) and deaths (279). There were 1,409 (25.1%) traumatology observations resulting from car accidents, falls, gun shots and knives wounds; and 56 patients (1%) were assisted in labor. The activation of the PHEMT involves a call to the 112 Emergency Center and triage, activation of the Hospital Unit, observation and immediate treatment for the most critical patients and the evacuation to the most appropriate hospital. 2,767 were transported to the local area hospital, 674 to central hospitals, 161 to coronary units and 2,010 were not transported at all.

Conclusions: The specific work in the ED demands human resources that can attend to the complexity of emergency complaints. The PHEMT, as an extension of the ED in the pre hospital field, is an example of the heterogeneity of patients that must be treated with specialized emergency medical units. Emergency Medical Professionals are necessary!

EVOLUTION OF EMERGENCY MEDICIAL HEAILTHCARE SYSTEMS IN SAUDI ARABIA

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Introduction: The kingdom of Saudi Arabia has witnessed a significant evolution in the development of emergency medical healthcare systems through the decades. The emergency medical healthcare systems have existed in primitive state since early mid 1940's-50. This system provided the emergency care to million's of pilgrims visiting the kingdom during the Hajj season. This infrastructure has existed for a period of time however the need for an organized state of the art emergency medicine healthcare system (EMHCS) has been long awaited. The kingdom of Saudi Arabia has also witnessed major developmental changes in the last few decades. With this progression came more buildings, highways, cars, and other paraphernalia of urban societies. The consequence of this has been a dramatic increase in major traumas, burns and toxicological syndromes. All this has made an affirmative impact on the development of emergency medical healthcare systems in the country. As a result there has been a major shift towards the development of state of the art EMHCS in this country in the last decade. There are total of 314 hospitals serving the 16 million population of KSA. There are 31,503 doctors serving as 1.6 physician per 1000 person.

The hospitals are under Ministry of Health (80%), armed forces (10%) and private sector (10%). Currently the EMHS in Saudi Arabia can be divided into two categories. In the 1st category the hospital ED is primarily staffed by physicians with different backgrounds, level of training and working from resident to consultant level. This staffing is present in all the hospitals except few. In the 2nd category physicians who are trained in Emergency Medicine staff the ED. At present there are only 3 hospitals in the kingdom that have board certified Emergency trained physicians. These emergency medicine trained physicians have been the backbone for developing the long term strategy and implementing the programme to upgrade the primitive emergency healthcare systems to the most updated state of the art emergency medical healthcare system. The two major links developed to enhance the EMHCS were first the start of the EM residency program and second the changes in the prehospital EMHCS. EM Residency Program was started in 1999 with the aim to enhance the quality of EM in Saudi Arabia. EM has been inducted into undergraduate curriculum with efforts underway to standardize the quality of health care delivery across the kingdom. The development of Saudi Society of Emergency Medicine is the next step in this direction. Saudi Red Crescent serves as the prehospital EMHCS provider. 176 stations nationwide with 390 calls per month per station average. 30% calls related to MVA. 70,000/yr transports. Paramedics are few thereby causing delays in response time and

stretching the limits during any disaster situation. The main focus has been to increase the number of paramedics with an active training program in place. As these links grow stronger and the bonds strengthen we feel it should not be long before EMHCS in this country should be comparable to any other EMHCS across the world.

SEVERITY OF BICYCLE RELATED INJURIES: A MULTIVARIATE ANALYSIS

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Aim: It is not agreed whether the reduced severity of injury in helmeted bicycle riders is due to the use of helmets or an epiphenomenon. In this study we aimed to define the factors that affect the severity of injury and length of hospital stay of bicycle-related injuries.

Methods: 298 patients with bicycle-related injuries were studied. A multivariate generalized linear model was used to test the effect of age, sex, helmet use, cause of injury, race, year of injury, place of injury, alcohol or drug use, and whether the injury occurred on public or school holidays, on the Injury Severity Score (ISS) and length of hospital stay.

Results: The significant factors that affected ISS, in order, were the cause of injury ($p = 0.0001$), helmet use ($p = 0.0003$), place of the accident ($p = 0.016$), age of the patient ($p = 0.017$) and whether it was on a public or school holiday ($p = 0.035$). When patients who had head injuries were excluded from the analysis, there was no significant difference in the ISS between those who used helmets and those who did not ($p = 0.72$, Mann-Whitney test).

Conclusions: The reduced severity of injury in helmeted patients was mainly due to protection of the head and not the behaviour of the cyclist. Collision with a moving vehicle has the greatest impact on the severity of injury. Ways to prevent bicycle collision with motor vehicles should be actively pursued.

PERIMORTEM CESAREAN DELIVERY FOLLOWING SEVERE MATERNAL PENETRATING INJURY: CASE REPORT.

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The origin of the term 'caesarean section' is probably related to an ancient Roman law, the Lex Cesar, requiring postmortem sections for separate burial of mother and infant, that means this operation has been practiced since antiquity. An injured pregnant woman presents as two patients, simultaneously requiring timely and effective evaluation, stabilization, and definitive care. As in other aspects of trauma care, injuries in pregnancy require a thoughtful and consistent approach to diagnosis and treatment. A case is described for severely traumatized pregnant patient whom perimortem cesarean section in the emergency department led to the birth of viable infants with one long-term survivor. We report a postmortem cesarean section resulting in fetal survival, performed after 45 minutes of maternal cardiopulmonary resuscitation in a patient with multiple penetrating injuries. A 27-year-old primigravida suffered cardiopulmonary arrest at 34 weeks' gestation after multiple knife injury. Although extensive advanced cardiopulmonary resuscitation had been performed for 45 minutes, her vital signs did not return to normal levels. A low segment cesarean delivery is performed, and a female baby was delivered.

The time interval between cardiopulmonary arrest and delivery, prior maternal health status, and continued cardiopulmonary resuscitation represent important determinants of fetal survival. Perimortem cesarean section is advised also in case of multiple penetrating injuries even after 45 minutes of cardiopulmonary resuscitation since it may result in fetal salvage. In summary, various anatomic and physiologic changes may alter the manifestations of given injuries and the treatment required to reestablish maternal-fetal hemostasis. Nevertheless, because of potential for survival of a normal infant, obstetricians must consider a cesarean delivery in any woman who suffers a cardiopulmonary arrest in the third trimester. In case of maternal death including cardiac arrest from all causes, every attempt should be made to perform cesarean delivery even after 45 minutes of cardiopulmonary resuscitation.

LOCALIZATION OF BLUNT SPLENIC INJURY WITH ABDOMINAL SONOGRAPHY

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Objective: To determine the correlation between sonographic detection of free fluid in the left upper quadrant (LUQ) and blunt splenic injury.

Methods: Retrospective review of all consecutive emergency blunt trauma sonograms performed at a Level I trauma center from January 1995 to January 2001. Data was collected on demographics, free fluid location, and patient outcome. Injury was determined by CT, DPL, and/or laparotomy. Student's t-test was used to detect differences between continuous variables, and Chi-square analysis was used for differences between proportions.

Results: A total of 4,320 blunt trauma sonograms were performed, and 596 (14%) patients had intraabdominal injuries. Mean age was 33.7 ± 19.1 (range 1 - 95 years), with 294 (49%) males, and 302 (51%) females. There was no statistical difference between age, gender, or mechanism for all subgroups. There were 405 true positive sonograms, 191 false negatives, 88 false positives, and 3,636 true negatives. Ultrasound sensitivity was 63.9%, and specificity was 97.6%; sensitivity for detecting isolated splenic injuries was 72.2%. Location of free fluid in patients with non-splenic injuries was compared to those with splenic injuries. Isolated LUQ free fluid was significantly associated with splenic injury (OR = 3.0, P = 0.002), followed by diffuse free fluid (OR = 2.1, P = 0.005). A subanalysis of isolated splenic injuries revealed an even more significant association between LUQ (OR = 3.1, P= 0.007) and diffuse free fluid (OR = 2.7, P = 0.0007).

C**onclusion:** Free fluid in the LUQ is significantly associated with splenic injury. This finding should triage patients more rapidly to CT, angiography, embolization, and/or laparotomy.

ALCOHOL ASSOCIATED ANKLE FRACTURES IN THE SOUTH EASTERN REGION OF IRELAND

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Alcohol abuse is sited as an increasingly common problem with significant financial and resource implications. We chose to evaluate all patients who presented to our orthopaedic unit with ankle fractures, to assess the incidence of alcohol associated ankle fractures.

Patients and Methods: This study was a retrospective chart review of all ankle fracture admissions over a one-year period (2001). In all, 236 patients were identified (139 males and 97 females), of whom 200 necessitated open reduction and internal fixation.

Results: The most common associated causal factor of fracture (44 of 236 patients or 17%) was alcohol. Sports injuries accounted for 15% and road traffic accidents accounted for 10%. In the alcohol associated fracture group, the median age was 38 years versus 24 years for the non-alcohol associated fractures. In the alcohol associated group 75% were male, while in the non-alcohol associated fractures 59% were male. The alcohol associated fractures were mostly low velocity injuries, with 18% occurring while still in the pub. There was no statistically significant difference in the fracture patterns or time to discharge between the two patient groups. The number of units of alcohol consumed per week was not recorded in any of the charts. No patient was referred for substance abuse counselling.

Conclusions: Alcohol abuse was the most common cause of ankle fractures in our unit. Problem drinking should be detected by admitting doctors using the CAGE, MAST and AUDIT questionnaires as brief interventions have been shown efficacious in the treatment of harmful and hazardous drinking (1).

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SIDE IMPACT VERSUS FRONT IMPACT IN TRAFFIC ACCIDENTS – A CLOSER LOOK ON INJURY PATTERN OF HEAD AND SPINE

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Introduction: In Germany neuro trauma still plays a crucial role within traffic accidents. While there are several investigations on frontal impact accidents there is still a lag of evident data concerning side impact. Goal of this investigation was to evaluate impact angles in traffic accidents regarding their significance for resulting injuries of the head and spine.

Methods: Data were obtained within the Accident Research Program of the University of Greifswald. Enrolled individuals were scanned for emergency management, trauma care and injury pattern. In addition every involved vehicle underwent a detailed technical inspection focusing on mechanism of accident and direction of impact. Enrolled patients were divided into 5 groups: 1) all patients, 2) brain injured (MAIS 2), 3) multiple injured, 4) severely brain injured (MAIS 4-5) and 5) spine injured patients.

Results: Within 1/2001 and 12/2002 140 accidents with 235 injured (166 male (71%); 66 female (29%); 182 (77 %) auto passengers; 25 (11%) motorbikers; 13 (6%) bicyclists; 12 (5%) pedestrians; mean ISS 16,57(SD22,37; 95%CI 13,7-19,44)) were included . 141 (60%) sustained brain or spine injury (111 (79 %) auto passengers; 15 (11%) motorbikers; 7 (5%) bicyclists; 7 (5%) pedestrians). Side impacts occured most frequently in group 3 and 4 with 62% of cases with co-drivers and 45% with drivers involved, respectively. In group 1 and 2 front impacts dominated (69% of all cases). Within group 5, 60% of upper and 60% of lower cervical spine fractures occurred after side collision. Compared to autopassengers pedestrians and cyclists had a significant side-crash ratio of 77%.

Conclusions: In spite of the fact that both, side and front impact, can cause severe head and spine injury there is some evidence about side impact being leading cause of severe injury of those regions. This should lead to further efforts to improve safety conditions in traffic not only by integrative traffic control but also regarding safety devices (i.e. side airbags or neck protection systems). Furthermore, out of the emergency physician´s view, a standardized on scene documentation of impact mechanism might help to identify life threatening injuries faster and safer.

SCOOTER COLLISION AND TRAUMA EPIDEMIOLOGY REPORT (SCATER)

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Introduction: The characteristics, demographics, epidemiology and injury patterns found on users of the modern foot and motorized propelled scooters.

Methods: A prospective consecutive cohort case series review of patient data was taken from 30 subjects who presented to a university Emergency Department (ED), Level I Trauma Center during Dec. 2001-Nov.2002.Twenty-five multiple response questions and an anatomical injury survey matrix were completed providing mechanisms of injury, user demographics, activities, protective equipment, safety knowledge and training, device usage, supervision age, gender and time of day.

Results: Sample size of 30 subjects, primarily male with a mean age of 15.8 years, with accidents occurring most commonly between 4pm and 8pm and in the month of September(20%). No deaths reported, 43% of subjects were traumas or hospital admissions. Forty percent rode powered scooters that accounted for 54% of the trauma admissions. There were 155 total injuries, 64% powered and 36% scooter devices with the most common injuries being the head and extremities. Most injuries occurred among first time users, ½ mile of home (73%) in dry conditions (80%) on even surfaces (43%). Most common mechanism was falling off the scooter (53%). Protective equipment was used in 37% of subjects who wore only helmets. Seventy percent had no adult supervision accounting for 92% of the trauma-admissions. The majority of subjects requested better safety information prior to scooter usage.

Conclusion: Data demonstrates scooter related injuries commonly affect the head and extremities and are associated with a lack of protective gear and equipment. Powered scooter devices account for a disproportionately large number of morbid events. Most scooter riders desire stricter scooter guidelines and safety information.

PRIMARY PROSTHETIC VALVE FAILURE AND LEAFLET EMBOLISM IN EMERGENCY DEPARTMENT

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Introduction: The present case is a patient with primary prosthetic valve failure and probable leaflet embolism. Prompt diagnosis of this complication is crucial because survival time after acute valvular dysfunction is only minutes to hours.

Case report: A 40 year-old man presented to the Emergency Department (ED) with a chief complaint of sudden-onset shortness of breath and pleuritic back pain. He was hypotensive with a blood pressure of 92/63 mmHg, pulse 135 bpm, respirations 37 breaths/min. Past surgical history was significant only for an aortic valve replacement and mitral valve replacement performed 16 years ago. Physical examination was normal except for respiratory examination that revealed inspiratory rales in the bilateral basal and middle lung areas. He also had tachycardia and a metallic sound on the precordium overall. Cardiology was consulted with preliminary diagnoses of acute pulmonary oedema and prosthetic valve failure to prepare emergent echocardiography. During the workup five hours passed after the initial complaint the patient quickly deteriorated. He became gradually hypotensive and he was intubated. The transthoracic echocardiography raised suspicion of prosthesis malposition. The patient was taken to the operating room by cardiothoracic surgeons for valve replacement. Operative findings revealed a prosthetic valve leaflet in the mitral position had broken off. It was not visualized on full body plain radiography. The operation was completed after replacement of the broken prosthetic valve with a Carbomedius mitral prosthetic valve # 31. The patient was dead 14 days after surgery.

Conclusion: Most emergency physicians do not have due experience dealing with patients with primary prosthetic valve failure. Detection of clinical findings on the history, physical examination, portable chest radiography and immediate transthoracic or transesophageal echocardiography will lead the emergency physician to an expedient diagnosis and management.

CHARACTERISTICS OF DIGITALIS TREATED PATIENTS ADMITTED TO HAEMEK MEDICAL CENTER EMERGENCY DEPARTMENT FROM JANUARY TO JUNE 2000

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The role of Digitalis in treating cardiovascular disease has been one of the oldest continuing controversies in the history of medicine. Advocates of Digitalis argue that the drug should be used because it can ameliorate the symptoms of heart failure and improve the quality of patients' lives. On the other hand opponents of Digitalis argue that the drug should be avoided because of doubts about its efficacy and safety. In our region the treatment with digitalis is not common but many patients who are admitted to our emergency department are treated with Digitalis. The object of our study was to evaluate the characteristics of these patients. We studied 127 patients that were treated in our department from January to June 2000 and a blood sample for digoxin level was taken from each of them. 51.2% were males, 48.8% females, mean age 74 years. The patients were subdivided into 3 groups according to blood digoxin level. Group 1 - 54 patients (42.5%) had subnormal values (<0.8 ngr%); Group 2 - 66 patients (51.9%) had normal values (0.8-2.0 ngr%); Group 3 - 7 patients (5.5%) had toxic levels (>2.0 ngr%). 53.5% were Ashkenazi Jews, 22.8% Sepharadi Jews and 22% Arabs. The most frequent complains at presentation were dyspnea (51.3%), fatigue (26.9%) and chest pain (19.3%). 72% of the patients had atrial fibrillation, 45.8% CHF and 45.2% IHD. The average blood pressure was 145/85 and average heart rate 93 bpm, but in group 3 the heart rate was 72.7 bpm (statistically significant p=0.032). The average urea level was 62.9 mg% (normal < 40). All the 7 pts in group 3 were male Ashkenazi Jews with atrial fibrillation, and the majority of them also had CHF, HT and chronic renal failure. Their average urea level was higher and their average heart rate was slower compared to the rest of the study population.

We conclude that any patient receiving digoxin especially those with group 3 characteristics, should have renal and heart function monitored closely. We recommend that physicians should keep a high level of awareness for the appearance of any sign or symptom of digitalis toxicity in pts with these characteristics.

ED ELECTRICAL CARDIOVERSION FOR ATRIAL FIBRILLATION: CARDIOLOGY COLLEAGUES MAY DIFFER

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Objectives: Although much has been written about management of atrial fibrillation of less than 48 hours duration (AFIB48), few data are available on electrical cardioversion of AFIB48 in the ED setting and how cardiologists view this practice.

Methods: A six-question survey was mailed to all admitting cardiologists at our community teaching hospital with an ED census of 50,000. The survey defined AFIB48 in a hemodynamically stable patient as being of less than 48 hours in duration or occurring in a patient who is adequately anticoagulated. The cardiologists were also informed that the cardioversion was done with conscious sedation using etomidate, a biphasic defibrillator, full hemodynamic monitoring and without prior TEE.

Results: All 21 cardiologists (100%) surveyed responded. Ten of the respondents (47%) stated they were aware of our ED practice of electrically cardioverting AFIB48 over the past 12 months and almost half of the cardiologists knew that at least one of their patients had been cardioverted in the ED. Twenty-seven percent had sent patients from the office specifically for ED electrical cardioversion and 43% would consider doing so. Although a large majority (84%) felt the practice of ED cardioversion was logical in at least some cases, 16% of responding cardiologists stated ED electrical cardioversion would never make sense. Seventy-nine percent of respondents would feel comfortable with ED electrical cardioversion of at least some of their own patients, while 21% would never feel comfortable. Only 2 cardiologists (10%) support electrical cardioversion of AFIB48 at the EP's discretion without prior notification of the cardiologist.

Conclusions: Among cardiologists there is a wide disparity of opinion on ED electrical cardioversion of atrial fibrilla-

tion of less than 48 hours duration and a large majority do not support this intervention at the sole discretion of the ED physician.

BLOOD LEVELS OF AMIODARONE FOLLOWING ENDOTRACHEAL ADMINISTRATION IN AN ANIMAL MODEL

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Objective: To determine if amiodarone is absorbed when given through an endotracheal tube (ET). Design: Pilot prospective observational animal study of 7 dogs and 5 pigs approved by the Institutional Animal Care and Use Committee. Setting: Summa Hospital Surgical Research Center. Subjects: 7 dogs and 5 pigs of similar size, weight and age were anesthetized with sodium pentobarbital 30mg/kg, intubated, and placed on a ventilator. An arterial catheter was used for sampling in the animals receiving ET amiodarone. The remaining animals had venous samples drawn. Intervention: 2 dogs and 2 pigs were given 3 mg/kg (1 dog got 6 mg/kg) of amiodarone diluted to 4cc in normal saline via ET tube followed by 5 insufflations with a 500cc Ambu bag. The remaining 2 dogs and 3 pigs were given 3 mg/kg IV. Main Outcomes: The primary outcome was amiodarone blood levels at 1.5, 5 and 30 minutes. Secondary measures were vital signs and arterial blood gas (ABG) measurements. Data is presented as averages with ranges. Statistical significance was not anticipated, as this was a pilot study.

Results: The average amiodarone levels for ET tube administration in all animals (6mg/kg) are as follows: 4.3ug/ml (6.05) at 1.5 minutes, 3.8ug/ml (8.6) at 5 minutes and 0.7ug/ml (1.55) at 30 minutes. The average amiodarone levels for IV administration in the dogs were 23.6ug/ml at 1.5 minutes, 8.8ug/ml at 5 minutes and 0.4ug/ml at 30 minutes and in the pigs 93.8ug/ml at 1.5 minutes, 4.2ug/ml at 5 minutes and 0.6 at 30 minutes. No consistent or clinically significant change in vital signs or ABGs was seen.

Conclusions: Measurable levels of amiodarone are obtained when given endotracheally to live dogs and pigs. Doubling the dose resulted in higher levels achieved and more frequent sampling revealed a sustained release. Clinically, this may provide an additional route of administration for amiodarone in cardiac arrest. The safety and efficacy of amiodarone administered via the ET route has not been studied, nor is the appropriate dose known. Further research in this area is warranted.

PHARMACOLOGICAL CARDIOVERSION OF ATRIAL FIBRILLATION WITH VERAPAMIL

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Background: Atrial fibrillation (AF) is the most common sustained cardiac arrhythmia. Atrial remodeling, probably due to the reduction in the L-type calcium current, has a central role in AF genesis and maintenance. The calcium channel blocker verapamil (V) can attenuate acute atrial electrophysiological changes AF-induced. This retrospective study analyzed the efficacy of V versus propafenone (P) to convert AF to sinus rhythm.

Methods and Results: 114 pts (70 women, 44 men) referred to emergency department with AF lasting < 24h without evidence of hemodynamic instability. The mean age was 68.7 ± 11.7 years (± SD, range 31-91). 58 pts were treated with V (5 mg bolus + 50 mg in 500 cc saline solution at 40 ml/h) and 56 pts with P (2 mg/kg bolus + 0.07 mg/Kg in 2 hours). No significant differences were found between the two groups in age, sex, hypertension, previous AF and ventricular rate response (139.7 ± 22.6 bpm, range 90-200). 34.8% and 16.1% of patients treated with V and P, respectively, had history of cardiac disease (hypertensive, ischemic, valvular) (P<0.05). Pharmacological cardioversion was obtained in 96.4% in P group and 89.7% in V group (P=NS). No significant differences were found in patients treated with P and V in the incidence of arrhythmic complications (3.6% vs 5.2%), need for electrical cardioversion (19.6% vs 25.9%) and discharged from the emergency department (98.2% vs 91.4%).

Conclusions: The present study suggests that verapamil, generally used for control of ventricular rate, possesses at least as much antiarrhythmic effects as conventional propafenone therapy. Moreover, verapamil can be safely used in patients affected by ischemic heart disease, a condition highly prevalent in AF. The antiarrhythmic potential of verapamil needs to be demonstrated in a prospective randomized clinical study.

EMERGENCIES IN HEREDITARY HEMORRHAGIC TELANGIECTASIA

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Background and Objective: The clinical course of Hereditary Hemorrhagic Telangiectasia (HHT) is most frequently a chronic, socially disabling disease. However life-threatening complications of HHT occur because of nasal and gastrointestinal telangiectases, pulmonary arteriovenous malformations (PAVMs) and cerebral vascular malformations (CVMs). With this study we aimed at evaluating the frequency of such complications and use of the Emergency Department (ED).

Patients and Methods: From August 2000 to July 2003, 102 patients were evaluated for HHT at the Bari-HHT Center. 67 patients had a definite diagnosis of HHT. Occurrence of major complications (massive nosebleeds, hematemesis and/or melena or hematochezia, hemothorax, hemoptysis, TIA/ischemic stroke, hemorrhagic stroke, brain abscess, seizures) and use of the ED were retrospectively evaluated.

Results: 19 out of 67 patients (28%) visited the ED at least one time because of HHT-related symptoms. Patients had a total of 33 ED visits distributed as follows: 13 nosebleeds, 9 hemathemesis/melena, 1 hemothorax, 1 TIA, 1 ischemic stroke, 1 likely hemorrhagic stroke, 1 seizures, 6 brain abscesses. Epistaxis was the most common symptom in these patients with HHT, and in the emergency-medicine setting as 13 episodes of epistaxis affected 9 patients seen in the ED; no definite hemorrhagic shock was recorded. Severe gastrointestinal bleeding occurred in 9 patients. 1 patient presented with a hemothorax, and complained of left back pain at symptom onset. Chest X-ray revealed a left pleural effusion and pulmonary opacities; effusion was hemorrhagic on drainage. CT scan diagnosed PAVMs. TIA was the onset symptom in a young girl with multiple PAVMs, who presented with a complaint of diplopia. 1 ischemic stroke occurred 4 days after a procedure of transcatheter embolization in a patient with mul-

tiple PAVMs. 1 patient died likely because of hemorrhagic stroke from a CVM impending neurosurgery. 1 patient complained of seizures because of a CVM. 6 episodes of brain abscess affecting 5 patients (1 recurrent brain abscess) were recorded.

Conclusions: Although our study was retrospective, almost 1/3 of HHT patients had visits to the ED, often because of severe disease. Heterogeneity of clinical presentation and a low knowledge of the disease may lead to terrific consequences. Emergency physicians should be aware of HHT and its major complications.

AN ONLINE ASSESSMENT & TRACKING TOOL FOR ULTRASOUND PROCEDURAL COMPETENCY

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Objectives: Formal credentialing guidelines for bedside ultrasound have been developed by both ACEP (minimum of 25 examinations per primary application) and the RRC-EM (total of 40 examinations irrespective of specific application). The ACGME has recently mandated that residency programs evaluate residents based on six Core Competencies. This study examined the ability of an online procedure log to track resident performance of ultrasound to meet published recommendations and as an assessment tool for the procedural component of the Patient Care Core Competency.

Methods: An observational study design was utilized. Participants were third-year residents at a three-year EM training program based at a major tertiary referral center with an ultrasound curriculum but no formal fellowship. Ultrasound procedures were entered into an online procedure log (MyResidency). Key data points included the specific application, patient information, findings, and electronic verification by supervising attending.

Results: For a period of thirty months, eight senior level residents recorded a total of 291 ultrasound procedures. The mean number of procedures recorded was 36 procedures. The number of procedures recorded for the 'Trauma/FAST' application was significantly greater than for any of the other applications (191/291, 65.6%, $p < 0.05$). The two next most common applications were "Gallbladder/Liver" (39/291, 13.4%) and "Pelvic – Transabdominal" (24/291, 8.2%). The remainder were performed for 'Renal/Hydronephrosis', 'Abdominal Aortic Aneurysm', and 'Pericardial Effusion' applications.

Conclusions: An electronic procedure log can document EM resident ultrasound experience and can be used as an assessment tool for the Patient Care Core Competency. The number of ultrasounds performed is closer to the RRC-EM recommendations but falls short of ACEP guidelines. Future directions are the development of a deficiency meter and comparison to final diagnosis for verification

EVALUATION OF PREOPERATIVE LEUCOCYTES AND ULTRASONOGRAPHIC RESULTS IN ACUTE APPENDICITIS

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170 patients, who had undergone appendectomy with prediagnosis of acute appendicitis or acute abdomen syndrome in General Surgery Clinic of Ýzmir Regional Military Hospital between November 2001 and March 2003, were evaluated retrospectively according to their preoperative ultrasonography reports and white blood count (WBC) counting results. The ages of the patients ranged between 12-64, and 151 of all the patients were male and 19 were female.

In 114 cases of 123, who had been operated with the diagnosis of acute appendicitis, histopathologic examinations were reported as 'Acute Appendicitis', but the other 9 were reported as ' Appendix Vermiformis'. Histopathological results for 41 of totally 47 patients, with the prediagnosis of acute abdomen syndrome were reported as 'Acute Appendicitis', 2 patients were reported as Appendix Vermiformis'. 109 patients of 114, with the prediagnosis and postoperative histopathological results of ' Acute Appendicitis', had (+) preoperative ultrasonographic results while the other 5 had normal preoperative ultrasonographic findings. Of the same 114 patients,98 had preoperative leukocytosis, but 16 had normal leucocytes values. 29 patients of 41, with the prediagnosis of acute abdomen syndrome and postoperative histopathological results of 'Acute Appendicitis', had (+) preoperative ultrasonographic results while the other 12 had normal preoperative ultrasonographic findings.Of the same 41 patients, 30 had preoperative leukocytosis, but the rest 11 had normal leucocytes values.As a conclusion, preoperative WBC counting and ultrasonography are still the most important diagnostic procedures in assessing the cases of acute abdomen syndrome and acute appendicitis, and we are routinely using these procedures in such cases.

CHEST ULTRASONOGRAPHY IN THE EMERGENCY DEPARTMENT: A ONE-YEAR EXPERIENCE

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Background: Although air is an excellent barrier to ultrasounds, some diseases can be diagnosed on Chest Ultrasonography (CU).

Patients and Methods: 132 patients were classified according to the clinical suspicion on admission. When available, results of CU were compared with diagnosis on chest x-rays (CXR), computed tomography (CT) or lung scintigraphy and Total Concordance (TC), Concordance in Confirming the Diagnosis (CCD), Concordance in Excluding the Diagnosis (CED) calculated.

Results: 28 patients had suspected pneumonia on admission. On CU 24 pneumonia-like consolidations were noted in 22 patients. For 18 patients a chest x-ray was available to compare results. CT 72%, CCD 85.7%, CED 25%. Pulmo-

nary edema was suspected in 26 patients; CU showed lung edema in all patients. CXR was available for 20 patients and revealed cephalization of pulmonary vessels, interstitial edema and alveolar edema in 1, 12 and 7 patients respectively. TC 95% (19/20). Five patients had pneumonia and pulmonary edema. CU showed a pulmonary edema pattern in all patients, but no pneumonia. CXR showed pulmonary edema in all patients and a lung opacity in 1 patient. TC for pulmonary edema was 100% but the pneumonia lesion on CXR was not observed on CU. One patient had pneumonia, pulmonary edema and pleural effusion, with CU showing bilateral effusion and no CXR available. Four patients had a pleural effusion, pneumonia, and lung cancer. An effusion observed in 3 cases was confirmed on CXR. No additive lesions seen on CU and CXR. Seven patients had pneumonia and pleural effusion. CU and CXR showed pneumonia in 2 cases; 5 patients were negative both on CU and CXR (TC 100%). Pleural effusion on CU in 5 patients and on CXR in 3; 2 patients negative on CU and CXR; TC 71%, CCD 60%, CED 100%. Five patients had pulmonary edema and pleural effusion. Pulmonary edema TC and CCD were 66.7%; CED not calculable. Pleural effusion TC and CCD were 100%, CED not calculable. 8 patients had pneumothorax. TC 100%. 5 patients had pulmonary embolus; 1 patient positive on CU and CT. 1 patient had a lung neoplasm. Twenty patients had blunt chest trauma; and CU identified pulmonary contusion in 15 patients, pneumothoraces in 2 patients and pleural effusion/ hemothorax in 3 patients. CT identified pneumothoraces, pulmonary contusions and hemothoraces confirmed; CT diagnosed a further pulmonary contusion and a hemothorax.

Discussion: Usefulness of CU has to be established and is probably variable according to different environments.

EMERGENCY BEDSIDE ULTRASONOGRAPHY IN THE DIAGNOSIS INFLAMMATORY SOFT TISSUE CONDITIONS

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Background: Soft tissue inflammatory conditions (STIC) presenting with non-specific symptoms of swelling, tenderness, and erythema are commonly encountered in emergency medicine (EM). Causes include cellulitis (C), abscess, phlebitis, neoplasm, pyomyositis, fasciitis, hematoma, lymphadenopathy, tendonitis, bursitis and joint effusions. Appropriate treatment depends on accurate diagnosis, which requires imaging studies, including ultrasound, MRI, and CT. Among these, ultrasound is rapid, repeatable, and avoids ionizing radiation. This report studies the prevalence of STIC in EM practice and the accuracy of EM bedside ultrasound (EMBU) performed by practicing physicians in diagnosing STIC. Objective: To evaluate the clinical utility and accuracy of EMBU in the diagnosis of STIC.

Methods: All EMBU performed in an ED with annual census of 50,000 were reviewed for a period of 21 months. Ultrasounds were performed by EM attendings and residents using a 5-10 Mhz linear array probe on a Toshiba JustVision machine. Sonographic findings were categorized as cellulitis (C), non-specific fluid collections (NSF), non-inflammatory swelling (non-STIC) and other (O). On the basis of drainage procedures, NSF were classified as either abscess (NSF-A) or various, including seromas, hematomas, and cysts (NSF-V). Findings were verified by either reference imaging studies by radiologists, real-time review by an experienced EM sonographer, or by the results of drainage procedures.

Results: During the study period 3900 patients received EMBU, 106 for STIC. Causes of STIC were correctly identified in 104. Causes included C (25), NSF-A (49), NSF-V (11), non-STIC (7), O (11), including tumor (7), osteomyelitis (1) and lymphadenopathy (2). 1 case of myofasciitis and 1 case of abscess were mistakenly identified as C.

Conclusions: EMBU is frequently needed for differentiation of causes of STIC, and is accurate for this purpose.

LEARNING CURVES IN EMERGENCY MEDICINE RESIDENT-PERFORMED BEDSIDE ULTRASOUND

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Background: The optimal training regimen for emergency medicine (EM) residents learning bedside ultrasonography (EMBU) is controversial. This is due, in part, to the fact that there is no data quantifying resident learning curves. This study examines the ability of EM residents to develop the skill to perform common EMBU applications during a dedicated training period.

Objective: To quantify improvements in the speed, technical skill, and accuracy of resident-performed EMBU during a four-week training course. Methods: EM residents (post graduate year 2 in a 4-year program) undergo a 4-week dedicated "rotation" in EMBU, with didactic instruction, proctored exams, and oral and written testing. Residents are trained in EMBU of the heart, aorta, biliary tract (RUQ), kidneys, 1st trimester pelvis (FTP), proximal veins of the lower extremities, FAST, and procedural applications. For this study, each EMBU was timed, and residents were required to submit a full series of still images for review. These were evaluated for technical adequacy; and diagnostic impressions were compared to reference imaging studies for accuracy.

Results: 398 scans were performed by 4 residents. Statistically sufficient numbers of FAST, RUQ, and FTP exams were obtained for analysis. Residents performed an average of 24 FAST, 15 RUQ, and 29 FTP. Between the 1st and last week of the rotation, exam times improved as follows: FAST: by 11% from 394 to 350 seconds (s), FTP by 17% from 725 to 596s, and RUQ by 22% from 733 to 570s. Average technical adequacy improved from 88% to 96%, and average accuracy improved from 97% to 99%.

Conclusions: This study demonstrates increasing proficiency in resident performed FAST, RUQ, and pelvic EMBU over a 4-week training period. Longer than expected exam times may be due in part to onerous image acquisition requirements. With further experience through residency training it is expected that exam times will decrease.

RAPID BEDSIDE ULTRASONIC EVALUATION OF DEPRESSED SKULL FRACTURES

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Background: Radiologic confirmation of a depressed skull fracture (DSF) may be difficult for the unstable multiple trauma patient.

Objective: To evaluate the use of ultrasound in the rapid diagnosis of DSF.

Methods: Porcine heads were harvested from an IACUC

approved lab. Using a flap incision, skin was reflected from the skull. A one cm diameter hole was drilled into the "fracture" area and the fragment depressed to a depth of 1cm. Gel filled the cavity formed by the depressed fragment. For "control" areas, no holes were drilled. The skin flaps in both fractures and controls were sutured into place. A blinded sonographer evaluated labeled fracture and control areas with ultrasound. Randomized "unknown" fracture and control areas were presented to the sonographer in a darkened room. Circles drawn on the skin represented areas of injury. An un-blinded assistant placed the 10 MHz linear ultrasound probe onto the area of injury. The sonographer could twist or tilt the probe. No lateral movement of the probe on the head was permitted such as to avoid detection of any irregularity of the skull by feel.

Results: Each assessment lasted less than thirty seconds. Thirty of 32 fractures were correctly identified. Thirty-six of 36 intact sites were correctly identified. N=68 Sensitivity =0.9375. Specificity =1.0000. PV = 1.0000. NPV = 0.9473. Uncorrected: Chi Square 60.39. Mantel-Haenszel: Chi Square 59.51. Yates corrected: Chi Square 56.65 .

Conclusion: Ultrasound may be used to rapidly evaluate and diagnose depressed skull fractures. Limitations: Non-living animal model. The effect of fresh or clotted blood in the DSF cavity may alter the sonographic image.

HAJJ EMERGENCIES

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Objective: To study the incidence of Diseases during Hajj, describe the patterns of injuries and describe the Hajj event as a unique mass gathering in the world.

Methods: Retrospective Review of the Hajj Seasons over the last 15 years. Data collected from statistics at Department – Health Affairs, Makkah Region.

Results: 1) Average of 2 million at the same time, same area and doing same thing. 2) Biggest/oldest mass gathering in the world. 3) Age average of 55 years. 4) Too many patients. 5) 1000/MD in 15 days, 700 patients/Nurse in 15 days (Hajj season). 6) 50% of death outside hospital. 7) CVS/MI scored the highest cause of death 27.7%. 8) Death rate: 40/100,000. 9) In 1982 June: 1174 case of heat stroke, 7308 case of heat exhaustion, whereas in 2000 March there were 7 cases of heat stroke and 1176 cases of heat exhaustion.

Conclusion: Unique event need unique efforts. National Course for Hajj Emergencies is needed to get Doctors aware of Hajj emergency medical problems, in addition to learn more about mass gathering and disaster preparedness and planning.

RECENT DISASTER EXPERIENCE MAY 12-13, 2003 PREPAREDNESS VS. REALITY

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Introduction: King Abdulaziz Medical City-Riyadh, is an Academic Institution with state of the art Emergency Care Center with an accredited local Emergency Medicine Training Program. The ED and institution have a Disaster Plan which was recently updated, after having tested the plan with mock drills and a real min-disaster, May 2002. May 12-13, 2003 our plan was activated after the 3 unfortunate and simultaneous terrorist bombings, which resulted in many casualities and deaths. Our ED received over 60% of the victims and we cared for 133 victims over a period of 2 hours.

Materials and Methods: A Phase III Disaster Response was activated at midnight. Stable patients in the ED were discharged, moved to other hospital out patient premises or admitted to a ward bed. The Triage Team took care of 133 victims: Black category were sent to the Morgue 26 victims Red Category were seen in the Critical Zone 9 victims Yellow Category were seen in Adult/Pediatric zones 39 victims Green category were seen in the Urgicare/observation zone 59 victims Recall of ED Health Care providers, other hospital staff and Administrators swiftly done. Command Center was established with the most senior Hospital Administrator onsite. An Information Station was established and all victims were taken care of within 2 and 1/2 hours. The Disaster All Clear was delayed until 0545 hours, secondary to communication barriers. Disaster De-briefing was held and opportunities to improve Disaster Response were identified.

Discussion: Patient demographs, injury patterns, problems encountered will be clearly tabulated. Recommendations to improve Disaster Readiness will be clearly outlined: Communication Barriers Health Care Providers Related Crowd Control Public Relations.

"VERSAILLES" MASS CASUALTY EVENT – LOGISTIC LESSONS

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Introduction: One of the largest civilian mass casualty events in Israel was the collapse of the dancing floor of "Versailles" celebration hall on the 24th of May, 2001. The data collected allows insight into disaster medicine practice, and demonstrates the nature of this disaster as different from any scenario we are preparing for.

Patients and methods: The study group included all patients from this even that were referred to one of the four emergency departments of Jerusalem. Data consisted of (A) demographic and logistic details, ICD-9 diagnoses as well as procedures and treatments were obtained from the medical records of the hospitals, (B) a phone-interview carried out 45-90 days from injury, and (C) hospitals' records regarding personnel, capacity, and utilization of equipment and facilities.

Results: Over 75% of all patients were evacuated from scene within two hours, arriving at the hospitals from 21 minutes after the crash. Maximal load on ER was 42 patients/30 min. (Ein-Kerem) and 36 Patients/30 min. (Shaarei-Zedek) both in the first two hours97 ambulances, 18 mobile ICU and 6 mobile first-aid units were dispatched carrying over 600 medics 40 paramedics and 15 physicians. All 156 ED beds in Jerusalem were evacuated and about 340 nurses were recruited, as well as OR teams and an undetermined number of physicians. Over half the patients underwent X-rays, and CT was preformed to 17% (61 scans/12 hrs. – 2 CT scanners in Ein-Kerem). 37.3% of all hospitalized patients were discharged within two days, and only 13.4% remained in the hospital over two weeks. 67% (no. 41) of the 61 surgeries that were held involved the skeletal system. The most abundant orthopedic diagnoses were those typical of fall from height and not of crush injury.

Conclusions: preparing a hospital for a mass casualty event may begin by defining the scale of event to be handled without recruiting other hospitals. Optional fixed and flexible bottlenecks should be identified and dealt with. When work algorithm or routine are affected – a clear "disaster regulations" are to be set. Pre-evaluation of "recovery period" for emergency department and the receiving hospital may be of great value.

PRE-HOSPITAL MANAGEMENT OF 1392 VICTIMS OF BLAST INJURIES CAUSED BY TERRORIST EXPLOSIONS IN ISRAEL AUGUST 2001 TO JANUARY 2003

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Maged David Adom (Israeli EMS System) teams provided pre-hospital management to 1392 victims of 22 Multi-Casualty Incidents (average 63 injured per incident) caused by explosions of suicide bombers. 175 (13%) were killed on scene. 281 were categorized as urgent casualties (21%). Mechanism of trauma: The explosion of powerful charges (in 3 incidents more than one charge). Inside buses (6) - 18% mortality. In confined place (7) 14.3% mortality. In open space (9)- 7.9% mortality. In most instances metal objects were inserted inside the explosive charges (nails, screws, screw nuts) increased the damage significantly. MDA forces amassed (average per incident): emergency vehicles 42 (22% - ALS); team members -116 (12%-ALS).

Timetable: From time of explosion (average per incident) : arrival of first ambulance = 4.6 minutes. Evacuation of first urgent injured = 11.5 minutes. Evacuation of last urgent injured = 28.3 minutes. TRIAGE: At the ALS level (61.5%). 281 were triaged as urgent casualties of whom: D.O.A - 32 (11.4%); Sever injuries (I.S.S. > 16) =96 176 (62.5%). Less sever injuries (medium) = 73 (26.1%). Life saving procedures = 68 life saving procedures were performed in the field (32.7% of severely injured). 48- Intubations , 7-chest drainage and 13- arterial hemorrhage control. 45 of the casualties on whom these procedures were performed survived . Evacuation of the casualties to hospitals: 116 urgent cases were evacuated at the ALS level (42%). 6 incidents occurred in areas without trauma centers 49 severely injured were evacuated to near by hospitals (63% secondary referral to trauma centers). 16 incidents occurred where trauma centers were available. A total of 127 severely injured were evacuated. 90 (71%) were diverted directly to the trauma centers. 37 to near by hospitals, 40% of them underwent secondary referral by MDA ALS vehicles to trauma centers.

Conclusion: An active national EMS system treating 50.000 trauma cases per year according to PHTLS guidelines operates equally well in emergency situations .The deployment of 450 ambulances (100 ALS level) staffed with 1200 employees and 7500 volunteers dispersed throughout the country enables MDA to provide professional pre-hospital response to 22 M.C.I and to save lives of many victims.

MASS CARBON MONOXIDE INTOXICATION AT AN ICE-HOCKEY GAME: ONE-YEAR FOLLOW UP

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During a premier league ice-hockey game some players, the referee and a spectator felt ill. It turned out to be a carbon monoxide (CO) poisoning caused by a gasoline powered maintenance machine. 84 patients from this incident were seen at the nearby emergency department the same night (mean carboxyhemoglobin (COHb) level was 16.5%, range from 4.6 to 30.2). 151 patients were seen later or in other hospitals. Apart from the file data from the different emergency departments a one-year follow up mailing was sent to all patients to evaluate delayed complaints and clinical controls. 159 patients returned their questionnaire (67.7%). Mean age was 28 years with 62% males.

Mean COHb was 10.2%. High COHb levels were significantly seen in people on the ice (referee, players and maintenance personnel; $p<0.001$). There was a significant relationship with the initial presence of headache ($p=0.006$), dizziness ($p<0.001$) and fatigue ($p<0.001$)and the COHb level. Abdominal pain, nausea and vomiting were not significantly related to the COHb levels. 6.3% of the patients had residual complaints, all including headache, with a significant higher incidence ($p<0.001$)with high COHb levels. Only 2 patients (1.3%)had an abnormal neurological control (1 slightly disturbed EEG and 1 persistent encephalopathic complaints). Work incapacity was not significantly related to the COHb levels. In the literature, CO is a known problem in skating rinks. The source is the exhaust gasses of the maintenance machines and, due to the microclimate above the ice, ventilation can be insufficient with CO accumulation.

To our knowledge this is the first mass CO intoxication during an ice-hockey game in Belgium. CO mass intoxications remain a risk in indoor sporting events. Although it causes an acute mass casualty incident it's limited in time and delayed problems are scarce. Symptomatology is a bad tool for triage. Best prevention is the use of non-mineral energy sources such as electricity.

CAN HAP – HOSPITAL DISASTER PLAN - BE USEFUL FOR TURKISH HOSPITALS ? A REPORT OF EMERGENCY MEDICINE ASSOCIATION OF TURKEY (EMAT)

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Objectives: To determine hospitals' general adequacy and preparedness in response to disasters, after the 17 August 1999, Marmara Earthquake, and to evaluate the need for comprehensive hospital disaster plans in Turkey during the Hospital Disaster Plan (HAP) Conference series.

Methods: From 25 September 2000 to 01 June 2003, twenty two standard Conferences and table-top drills were organized by EMAT, in twelve different cities, througout Turkey. Organizations of the Conferences were accompolished by EMAT Main Office Secretary. Professionals who work in their hospitals' disaster teams, administrative offices, clinical services (doctors, nurses, etc) and ambulance services were all invited to these Conferences. They were organised for participants from university, state and private hospitals. Post-conference questionnaire included twenty questions. They were given to all 1440 participants.

Results: The Conferences had a total of 1440 professional attendees. The participants were grouped according to the following categories: Doctors, 446 (31%); nurses, 360 (25%); paramedics, 188 (13%); the others, 446 (31%). Of these 25% said "-No" to "-Does your hospital have any disaster plan?". 34% of the participants chose "-Not sure" for the same question. 96% said "-Yes" to "- Would you like to have a role in your hospitals' disaster plan". 93% of the participants said "-Yes" to "- Can the HAP program be effective at your

hospital?". 49 % said that their hospital were not ready for a disaster.

Conclusýon: Health care professionals are the cornerstones of any disaster plan. Most of the hospitals that were visited during the Conference series, did not have any kind of an organized HAP, three years after the Marmara Earthquake. However, professionals and staff wanted to have a role in any new plan. We concluded that, while some hospitals are not prepared to deal with any new disaster, HAP can form a solid basis for new guidelines that are easily applicable to every hospital througout Turkey.

ACADEMIC EMERGENCY PHYSICIANS' OPINIONS OF PREHOSPITAL EMERGENCY CARE IN TURKEY

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Objective: To determine opinions and attitudes of emergency physicians (EPs) and attendings staffed in academic and university-affiliated emergency departments (ED).

Materials and Methods: Fifty-eight EPs and ED attendings who agreed were asked to fill in a previously constructed questionnaire concerning judgments and opinions with regard to prehospital care in Turkey. The questionnaire was filled in using a face-to-face manner. Student's t-test and ANOVA were used to analyze the data.

Results: Thirty-nine EPs (79.2%) indicated they had received nil to inadequate formal education pertinent to prehospital medicine and 22 EPs (38.9%) reported that they had no or only little formal education on how to administer prehospital care. 48 EPs (82.8%) considered the care and interventions done in the ambulances as insufficient. Similarly, 53 EPs (91.4%) thought it would be better to have EPs not only to assume responsibility in the general care provided in the ambulances but also to educate the staff. 53 EPs (91.4%) stated that they preferred paramedics working in the ambulances.

Conclusion: Prehospital care rotation should be established in the context of the emergency medicine core curriculum, paramedics should be staffed in ambulances and EPs are expected to assume a more dominant position in controlling the emergency medical services system.

NEEDS ASSESSMENT OF AN EMS SYSTEM

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There is a need to know where one is going in order to assure one get there. EMS needs a map as well. The assessment process allows a system to determine how to appropriately get from point "A" to point "B". Over the years U.S. DOT/NHTSA has conducted assessments of systems nation-wide. In recent years the Center for Emergency Medicine has been responsible for conducting assessments in the Middle East. There are lessons to be learned from looking at both national and international programs. Dr. Stoy will take participants step-by-step through the process.

THE DUTCH EMS SYSTEM MODEL AND ITS APPLICABILITY IN COUNTRIES DEVELOPING EMS

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Background: Establishing Emergency Medical Services (EMS) is challenging for administrators and government agencies as political climates and limited resources impact its development. In the U.K., Canada and the U.S., EMS required significant investment on equipment, dispatch centers, personnel and their education. Although Anglo-American concepts of EMS have been shown to be applicable in other nations in their early development, the cost of blueprint implementation may prove prohibitive. Alternative systems should be considered. Objective: Examine EMS development in Amsterdam, the Netherlands since 1997.

Methods: EMS was assessed by delineating the infrastructure upon which care is delivered. The following elements were examined: dispatch center personnel and health care provider training and certification, ambulance staffing, and triage systems.

Results: At the dispatch center, only 40% of "112" calls require emergent ambulance dispatching based on nationally unified triage protocols. The remaining 60% are non-emergency calls and inter-facility transports. The dispatchers are ALS experienced and critical care nurses with training in Emergency Medical Dispatching. Ambulances are staffed with 1 ALS provider and a driver with Basic Life Support (BLS) training. The ALS providers are nurses with a minimum of 24 months of postgraduate critical / emergency care training experience. They participate in additional training in prehospital and EMS procedures for a period of one year. This level of education and training have enabled the Dutch EMS to give autonomy to the ambulance nurse to treat and release 30% of emergency cases and deem others as not requiring treatment or transportation.

Discussion: Nurses exist in all world communities. In the Netherlands they replace the need to establish a Paramedic Training Program, saving limited resources. In addition, a well-designed triage system can translate into a considerable amount of monetary savings by not transporting every patient to the Emergency Department (ED). Resources are utilized more efficiently with savings in: Ambulance personnel time / transportation cost, ED nurse and physician time, as well as hospital costs.

Conclusion: The incorporation of nurses into Dutch EMS has been successful and this model should be considered for countries developing EMS.

DEVELOPING EMS IN BULGARIA AND PROMOTING EMERGENCY MEDICINE AS AN INDEPENDENT SPECIALTY

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Providing emergency medical care is a state policy. Both pre-hospital and hospital emergency medical care is provided by 29 centers for emergency medicine and accidents (CEMA). In 1990's Bulgarian government declared that the old system of "rapid aid" is ineffective and started a reform in EMS with the main idea to secure the nation with emergency medical care of high standards. We have chosen the European model for developing our EMS. In 1996 Emergency medicine was declared to be an independent specialty. The first residency program was started in 1997 with duration of 4 years. Now we have 5 centers for postgraduate training with a national curriculum and a state examination committee in EM. In 1999 Emergency Medicine Association was founded. In this paper we try to make a dissection of what we planned, what we achieved and how we see the future of both EMS and EM as a specialty.

HELICOPTER EVACUATION. THE SINGAPORE GENERAL HOSPITAL EXPERIENCE

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The Singapore General Hospital (SGH) is the premier hospital for medical air evacuation. We have been doing this for 30years. Evacuation of casualties by helicopter had previously been used to shorten evacuation times allowing more rapid definitive management of casualites at tertiary medical centres. A retrospective study of helicasevac mission to the SGH over a 5 year period from 1997 to 2002 was conducted to review the current state of helicopter casualty evacuations in Singapore. Currently all helicopter evacuations are coordinated by the Republic of Singapore Air Force through the Ministry of Defense Operations Centre. Of the 116 casualties evacuated over 107 missions during the period, 88%(102/116) were trauma related and 12% medical. The majority of these (55%) were military national servicemen with heat injuries, followed by external injuries (21%). The most common medical referral was for cardiovascular causes namely acute myocardial infarct. Most of the patients brought in were critically ill, unconscious or semiconscious. Most were admitted 108/116 (93%) The on-scene diagnosis and inpatient diagnosis for the patients were consistent in 96.6%. The locations were mainly from surrounding islands of Singapore - 50%. 20% were from the ships traversing the shipping straits eg the Straits of Malacca and South China Sea. We had 29% of casualties air evacuated from military camps within Singapore.

The benefits for airlifting such patients within Singapore were questionable but they were done as a gesture by the Republic of Singapore Arm Forces that they were doing their utmost for their ill servicemen. Of all admitted there was no mortality. 68%(79/108) were sent to general wards, 8%(9/108) to intermediate care and 17% to intensive care unit (20/108). The usefulness of rushing patients who have already collapsed and without any sign of life, into a helicopter for rapid evacuation to hospital is doubtful. None of the 4 patients who had already collapsed prior to helicopter transport survived attempted resuscitation at the emergency department. The variety of trauma and nontrauma medical problems of casualties requires that medical professionals in helicopter evacuation be well versed not only in cardiopulmonary resuscitation but also in Advanced Life Support measures and in various aspects of providing emergency care in a prehospital environment.

This study demonstrated a need to further review the indications for helicopter evacuation of casualties within the main island of Singapore, and those who were in sustained cardiac arrest prior to helicopter evacuation. With this review, we hope to extend our helicopter evacuation services to nearby surrounding regions of Singapore.

EVALUATION OF PREHOSPITAL PRIMARY CARE IN WESTERN AREA OF TEHRAN CAPITAL CITY

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The Emergency medical Service (EMS) has an active role in the prehospital care and transport of patient in Tehran capital city. Yet, most of the EMS personnel has received little training to develop and maintain necessary expertise in the domain of their responsibilities. This study was conducted to evaluate the quality of patients care by the EMS in the western region of Tehran city. Methodology: Prospectively all the patients transported by the EMS to a high volume emergency department (ED) at western region of Tehran from November 1,2002 to December 1,2002were enrolled in this study. The data collected through a checklist by interview with EMS personnel and reassessment of the patients in ED by emergency physicians (EP). The checklist items included: The time of notifying EMS, time to scene arrival, time to ED arrival, impression or diagnosis, recorded vital signs(VS), GCS score, the type of airway management, supplemental O2 administration, Intravenous Line (IV Line), type and doses of given medication, appropriate cervical spine immobilization and proper control of external hemorrhage. Results: 87 patients were enrolled in the study in November 2002. The primary impression was multiple trauma in 40 cases (45%), chest pain due to cardiac problem in 22 cases (26%) cer5ebrovascular accident (CVA) in 8 cases (9%), seizure in 3 cases (4%), and others 14 cases (16%). The mean of the time intervals from notifying EMS to scene arrival was 13 min, the mean of the interval from scene arrival to ED arrival was 33 min. Blood pressure was recorded in EMS charts in 96.55% of cases, pulse rate in 93.1% of cases, respiratory rate in 65.57% of cases, temperature in 5.74% of cases and GCS score in 70.11% of cases. IV Lines were taken in 95.56% of patients. Only 44.82% of them were patent and functional. Cervical Immobilization was done in 5.55% of multiple trauma patients. Conclusion: A significant number of charts were recorded incompletely by Tehran EMS personnel. In a few number of multiple trauma patients, cervical spine was immobilized and less than half of them had a secure IV line. Regular training and implementing of quality assurance programs are critical should the performance of Tehran EMS personnel is to be improved.

FALLS: A MODIFIABLE RISK FACTOR FOR THE OCCURRENCE OF HIP FRACTURES IN THE ELDERLY

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Objective: To examine the clinical and demographic features of patients with hip fractures presenting to the Emergency Department of the University hospital of the West Indies Kingston Jamaica to see if this was similar to what occurred universally. The University Hospital is a five hundred bed teaching hospital located in Kingston the capital of Jamaica and serves a population of approximately one million people. The Emergency department sees approximately sixty thousand patients per year.

Methods: The study involved all patients with hip fractures registered in the Trauma Registry at the University Hospital of The West Indies between January 1, 1998 and December 31, 2001. The Trauma registry utilizes software developed by a group in Kentucky USA. The patients' information which was collected prospectively was examined retrospectively for age, gender, associated extrinsic and intrinsic factors, cause of the fractures, location when the fracture occurred and the site of the femur that was fractured.

Results: One hundred and fifty two persons were identified. There were one hundred and eleven women and forty-one men. The commonest cause for hip fractures (ninety percent) was falling. Seventy eight percent of the falls occurred in the over sixty-five age group. Most of the falls occurred in the patients' homes.

Conclusion: This study indicated that falling at home was the commonest associated factor for the occurrence of hip fractures in a Jamaican population. Preventive measures (safer homes, hip protectors) may lead to reduction in the frequency of hip fractures seen in the emergency room.

THE SPECTRUM OF TERROR-RELATED INJURY IN CHILDREN

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Context: The pattern and severity of injuries to children as a result of terror-related explosions and shootings have not been well described. Objective: To describe the spectrum of injuries and to determine factors that contribute to morbidity and mortality in terror related trauma in children. Design, Setting, Patients: Retrospective case study of Israeli children 0-18 years old who were entered into the Israel Trauma Registry (ITR) who were hospitalized for terror-related injuries between September 29, 2000 and June 30, 2002.

Methods: Patient characteristics included age, sex, diagnosis by e-codes, mechanism of injury, Injury Severity Score, injury by body region, mortality, ICU length of stay, and total hospitalization length of stay. Statistical analysis was performed using SAS.

Results: During the study period 158 children were hospitalized for injuries by terror-related activities. They accounted for 1.4% all injured children but for 11.3% of all in-hospital deaths for trauma in the ITR. Explosions injured 114 children (72.2%), shooting 32 (20.2%) and 10 children (6.3%) were injured by other mechanisms such as stoning, stabbing or deliberate running over by a motor vehicle. Older children were injured by explosions more frequently than younger children (86.1% of 15-17 years old, 73.7% of 10-14 years old, 63.2% of 0-9 year olds). Compared to children injured by shootings, a significantly higher percentage of children injured by explosions had an Injury Severity Score greater than 16 (86.4% vs. 13.6%), a higher admission rate to the ICU (33.6% vs. 20.6%), and longer median lengths of stay in the ICU (4.0 vs. 3.0 days) and in the hospital (6.0 vs. 4.0 days). The most frequently injured body regions were upper and lower extremities (58.2%), head and face (44.3%), chest and abdomen (34.2%) and severe brain injury (17.1%). More than one body region was injured in 59.9% of children. Compared to children injured by shootings, children injured by explosions had twice as many head injuries, 2.1 times as many facial injuries and 4.0 times as many eye injuries. There also had a lower incidence of abdominal trauma (14.9% vs. 26.7%), a similar incidence of chest trauma (17.8% vs. 13.3%), but a higher incidence of extremity trauma (95.3% vs. 73.3%). There were 7 in-hospital deaths, 6 due to severe head injury and one due to severe abdominal trauma; 6 of the 7 deaths were due to explosions and all but one occurred in children 15-17 years old.

Conclusions: Terror-related injuries cause significant morbidity and mortality in children. Injury severity is significantly higher among children who are injured by terror-related explosions than by shootings. Improvement in the political climate of the Middle East will hopefully diminish the number of children injured and killed as a result of terror related activities.

COLLES' FRACTURE; A WEEK LATER

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Objective: The purpose of this study was to evaluate the ability of immediate post-manipulation check radiographs to predict the final outcome in Colles' fractures (in different age groups).

Method: Two year retrospective study of randomly selected one hundred patients. Seventeen patients were less than 50 years of age, twenty-four in 50-65 years age group, thirty-nine in 65-80 years age group and twenty in above eighty years age group, with age range from 25 years to 95 years. Medical records and radiographs were studied in all these cases who attended Orthopaedic and Accident & Emergency clinic follow-ups.

Results: After fracture reduction, radial length was restored satisfactorily (more than 5mm) in all patients. Dorsal tilt was inadequately restored in17% (over 10 degrees of dorsal tilt) and radial inclination in 4% (less than 12 degrees) of patients. One week later, loss in correction increased to 26% in dorsal tilt, 13% in radial inclination and 12% in radial length. After 8 weeks (at fracture union), radiographs were similar to post one week check radiograph (radial tilt in 21%, radial height in 11% and radial inclination in 19% of patients). Most of the patients where fracture slipped considerably, at end of one week, required to undergo surgical correction. We noticed that most of the Colles fractures slipped by one week of manipulation.

Conclusion: Immediate check radiographs may be reassur-

ing but loss of correction is statisticaly sinificant and well marked by one week which is dependent on comminution, soft tissue damage, immobilization and patient compliance. Our study has shown that check radiographs performed after one week of manipulation are good predictors of final radiographic outcome and should be used as guide to further management.

TRAUMATIC HAEMARTHROSIS OF THE KNEE

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Haemarthrosis of the knee is a common, recognised problem and was considered benign by Watson-Jones (1946) in absence of gross joint laxity and normal radiograph. DeHaven (1980); Noyes, Basset et al (1980) suggested a very high incidence of anterior cruciate ligament damage in cases of traumatic haemarthrosis.

Objective: To evaluate the injuries sustained following haemarthrosis of the knee in a relatively young population and to assess the need of performing cultures on aspirated blood.

Patients and Methods: Notes of 510 patients attending the A&E Department of the Alexandra Hospital, Redditch, between 1990 and 1990 were retrospectively studied. All these patients had their knee aspirated following traumatic haemarthrosis. Age, sex, mechanism of injury, final diagnosis and management were recorded. It was noticed that all these patients had their knee aspirate cultured and the reports of culture of aspirated blood were obtained from the Department of Pathology. Medical records of all 510 patients were reviewed. Exact diagnosis was confirmed by an MRI scan or arthroscopy findings. Patient's follow up records from Orthopaedic outpatient clinic or A&E clinic were reviewed.

Results: The major cause of haemarthrosis was noted to be slipping on floors, pavements and stairs and this accounted for 52% of cases. Sports injuries accounted for 38% of cases. 38% of patients had idiopathic haemarthrosis and 52 patients were diagnosed as having medial collateral ligament sprain, which settled without interventional arthroscopy. 54% of patients underwent arthroscopy. None of the cultures of the aspirated knee showed any significant growth of bacteria.

Conclusions: The major cause for haemarthrosis was determined to be falls. 40% of cases whose knee aspirate was cultured settled conservatively without intervention. The cause of their haemarthrosis was thought to be a minor injury (idiopathic).

LONG TERM OUTCOMES FOLLOWING MAJOR TRAUMA - A 12 YEAR REVIEW

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Major trauma is one of the leading causes of death in the young and potential years of life lost. There is no long-term, population-based trauma outcome data and no trauma follow-up beyond 9 years. We looked at 12 year outcomes from a population-based sample of major trauma patients injured in 1990.

Methods: A stratified random sample of hospitals in Northern Ireland were selected in 1990. Patients were included who reached hospital alive with an ISS >15. Follow-up at 12 years was via the general practitioner. Glasgow Outcome Scores and employment status were recorded in those patients discharged from hospital alive.

Results: Of 239 patients (23.2/100 000 population), 74 died in hospital (7.2/100 000). One hundred and sixty-five survived and were discharged from hospital. One hundred and thirty have been traced. Four have left the country. At 12 years, 20 patients had died (1.9/ 100 000), mostly of age-related conditions and unrelated to trauma. Seventy-three (44%, 7.2/100 000) had no or mild disability. Twenty-six (16%, 2.6/100 000) had major disability. Ten (6%, 1/100 000) required assistance with activities of daily living. One patient was in a persistant vegatative state. Seventy-five patients were working at time of injury and 52 were working 12 years later, others having died, retired or suffered a disability.

Conclusions: Most patients who leave hospital following major trauma are living independently 12 years later. Most deaths after discharge are not due to trauma.

MAJOR TRAUMA IN SWEDISH CHILDREN - A SURVEY OF CHILDREN ADMITTED TO A PAEDIATRIC INTENSIVE CARE UNIT

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Background: Sweden has the lowest injury death rate for children aged 1 to 14 among the member countries of the OECD. Injured children cared for at an intensive care unit (ICU) have a great morbidity and mortality. This is the first study of this paediatric patient population in Sweden.

Objective: To describe the demographics, mechanism, pattern, and severity of injury, prehospital and hospital care (first 24 hours) and the patient outcome in severely injured children in a paediatric ICU (PICU).

Method: The medical records of 131 traumatized children (0-16 years of age), admitted to the PICU in Gothenburg 1990-2000, were retrospectively examined. The Injury Severity Score (ISS), Glasgow Paediatric Coma Scale (GCS), Revised Trauma Score (T-RTS/RTS), Paediatric Trauma Score (PTS), Trauma Score Injury Severity Score (TRISS) and Paediatric Risk of Mortality Score (PRISM) estimated the severity of injury.

Results: About 7/100 000 children with severe injuries were admitted to the PICU each year from 1990-2000 inclusive. Epidemiology showed a similar pattern as in other OECD countries. Severity of injury was recorded as an ISS median of 14. Mortality rate in our series was 3%.

Conclusion: Major trauma with admission to a PICU is rare in Swedish children. Cared for at a centre with the necessary facilities and trained personnel these children have a good chance of survival.

EMERGENCY MEDICINE TRAINING PROGRAM FOR REMOTE ZONES IN ARGENTINIAN PATAGONIA

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Patagonia is the southest extreme of America and one of the most beautiful places in the world. Bariloche lakes, Calafate glacier, the wales in Madryn and Ushuahia, the End of the World City are famous over the world. Even though it is a big region, 1000 km wide and almost 1800 km long, only 1.000.000. people live in it. In the Province of Chubut, the Health Minister with a group of Emergency Medicine physicians organized a specific Emergency Training Program for the remote zones of the province.

This program was designed to improve the response of the small hospitals from where the patients, once stabilized are transferred to the regional Hospitals, not less than 4 hours by ambulance. It is important to consider that in 3 or 4 months of the year the snow covers a great part of the province, making it more difficult to call for aid, the response and the subsequent mentioned tranfer of the patient. The course Program is divided in two intensive days, 12 hours each. Transfer practical workshop, surveillance in cold zones and hypothermia are some of the topics developed in the course. 5 courses were performed during 2002 and more than 220 persons with different roles were present. 8 courses are planned during 2003 and improvement in patient assistance and transfer has been observed. Our slogan: no place is too far to be forgotten.

RESULTS OF THE EDUCATIONAL PLAN FOR THE IMPLANTACION OF AN AUTOMATICAL EXTERNAL DEFIBRILATION (AED) PROGRAM IN GALICIA

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Objectives: During last years initiatives of emergency services of the autonomous communities for the implantation of systems able to revert the situations of sudden death due to ventricular fibrillation and ventricular tachycardia without pulse. These two arrhythmias suppose 75% of the causes of death in the patients with acute coronary syndrome and its only effective treatment is the defibrillation. We present the model chosen in Galicia for the formation of the groups implied and its results after the implantation of two phases of AED.

Methods: The systematics used by the PEHF-061 for the implantation of a program of AED in all the ambulances of the network of urgent sanitary transport (RTSU) of the Galician community is described. For it one has formed to the technicians in sanitary transport (TTS) of the RTSU with resuscitation courses to cardiopulmonary basic-AED that according to decree 251/2000 of 5 of October must make and surpass a course of 9 hours with theoretical and practical examination as well as an obligatory annual recycling.

Results: It was begun forming the teachers with a total of 99 for all the community. During year 2000 286 TTS in 14 courses formed. Year 2001 had 400 students distributed in 23 editions. For external personnel to the ambulances of the RTSU 14 courses with a total of 238 students were distributed. In the past year 28 courses with 444 TTS were made. At the moment we were in phase of recyclings with 48 made editions and 685 students who have surpassed in the 99,5% of the cases this recycling of satisfactory way. The total of registered TTS was of 1130, with 985 apt ones (87.16%), 97 not presented/displayed conditions and 48.

Conclusions: The implantation of a AED program must be based on the TTS with adapted information to primary care professionals. The formation in AED with a program of 9 hours eminently practical and an annual recycling of 4 hours has been tremendously effective with a 95% of success of the educational plan.

MONITORING ECG 12 DERIVATIONS WITH HARNESS: COMPARATIVE STUDY ON CONVENTIONAL MONITORING WITH ELECTRODES

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Framed in the project of telemedicine and defibrillation in emergency of the SUC (Canary Emergencies Services) we put in march a comparative study of transmission route telemedicine of ECG of 12 derivations between (among) conventional monitoring with electrodes and the conventional monitoring with electrodes and the monitoring with harness of rapid monitoring. We want to verify the reliability of the transmission with harness, to measure the profit of time in the monitoring and to evaluate the problems that we found in the practice on having applied the technology. Methodology: Every supposition consisted of the monitoring and transmission of an ECG of 12 derivations of a healthy volunteer of two situations; with 10 disposable electrodes and with (in spite of) harness of silicona (ECG electrodes Belt W/> rm oval electrodes, model; TSK ARhOd0018, distributed by TAPUZ Medical Technology Ltd) gelando the points. The transmission I realize from a DEA shape FRED of the house Schiller with capacity of transmission across a MODEM GSM to the room of sanitary coordination of the SUC in the CECOES 1-1-2 of Las Palmas de Gran Canaria, where it is got for two lines; RDSI and GSM. Result: In whole there were done 30 ECG transmissions of 12 derivations (15 with electrodes and 15 with harness). All the transmissions were realized with normality I save in two occasions: a transmission from ASVB on having happened (passed) under a tunnel and a transmission from a craft in which an operator extinguished the DEA for mistake. Place of the transmission; the first 12 did from the unit of formation of the SUC on the 07-03-2003rd. The remaining 18 did to themselves as fieldwork from differently Fuerteventura and Lanzarote's points during 31-03-03 and 01-04-03, in sanitary centers, ASVB and crafts. 20 from sanitary centers, 6 from ASVB, 4 from passengers' crafts, position during the transmission; stretcher 18, sat, stopped 4, sat in movement 8. The transmitted EKG was got in the head office (plant) of telemedicine for the application SEMACOM and there were transferred to the application SEMA 200 that it (he,she) was exploiting the results. In every ECG 10 parameters were compared: FC, RR, PQ, QRS, QT, QTc, Axis (axle).

Conclusions: 1-In no case the down thorax hair was an obstacle for the transmission with harness and it was not necessary to shave. In some cases the transmission with electrodes was impossible without shaving, 2-The times of monitoring were slow significantly in the monitoring with harness saving approximately two minutes in spite of the fact that the personnel was trained in the monitoring with electrodes and it was the first time that they were using the harness. Monitoring with electrodes; 2 30 ", monitoring with harness 30 ". 3 ideal transmission in spite of not supporting the position of supine decubitus; sat in movement in ambulance in march and in crafts, they appreciate significant differences neither in the tracing nor in the parameters ECG between (among) the ECG monitored with electrodes and the monitored ones with harness. 5-It is an effective and efficient system but we do not recognize his (its) permanence of the device throughout the time.

SHORT METHOD. QUICK AND EFFICIENT TRIAGE

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The short method was created as pre-hospital initial triage before mass casualty incidents (MCI). It is thought to be applied by non sanitary personnel (fire-fighters, police, etc.) and it aims to simplify the initial rescue task. The letters of the acronym SHORT stand for the steps to follow. S (Steps out – to leave walking), H (Holds normal conversation – to talk without difficulty), O (Obeys simple orders – to obey simple orders), R (Respiration – to breath), T (Treats haemorrhages – to plug haemorrhages). Colours are used to classify the gravity of the victims. Green is applied to those victims with light injuries who can walk (S; he/she leaves walking). Among those victims who cannot walk, the classification is as follows: Yellow for moderate seriousness (H and O; he talks without difficulty and obeys simple orders); red, very serious requiring immediate stabilisation (R; he breaths or shows blood circulation signs, and black, deceased victims or with fatal injuries (R; he cannot breath and doesn't show blood circulation signs).

Objectives: To assess the effectiveness of the SHORT method to discriminate the most serious victims. To calculate the triage time used up per victim. Methodology: Implementing with MCI drills or mocks and teaching practices carried out between December 2000 and April 2003 with a total number of 203 clinical cases. The victims roles were played by trained extras made up for the desired effect. The rescuers were the fire-fighters and the non-sanitary personnel of Basque Country (CAV). Design: descriptive and transversal study. Indications: feeling, specificity, positive prediction value and negative prediction value. Parameters: Number of victims classified as red, yellow, green and black. These results have been contrasted, by using contingency tables, with the estimated classification. Time used up in the triage.

Results: Average triage time per victim: 18 seconds. Discrimination of "reds" in the classification: 92% feeling, 97% specificity, 90% positive prediction value, 96,5% negative prediction value, 96% global value. Global percentage of right answers in the classification: 93,5%.

Conclusions: The SHORT method is easy, effective and easy to remember. It is well suited to the formation of those who lack of medical knowledge and it envisages a rescue with more protocol in a realistical way.

THE OUT OF HOSPITAL EMERGENCY TEAMS. ACTUAL MODEL IN ANDALUSIA (SPAIN)

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Even though the first Mobile Intensive Care Units were created in Belfast in 1966, it was not until the 90' s that out-of -hospital emergency teams became common. The Spanish model of out-of-hospital emergency care is based on 3 aspects: - Three figure telephone number - Co-ordination Centres - Out-of -Hospital doctors Although Spain has a three-digit number for contacting the Emergency Co-ordination Centres (ECC) , the number is not the same in all parts of Spain. The Council of European Communities is implanting at the moment, in the whole of Spain, the number 112 which is the number to be used in all of Europe. This number integrates all emergency services (police, fire, civil protection, ECC etc.). The most common model for out of hospital emergency care in Spain is that of the out of hospital doctor. All models have a common characteristic that is the presence of a doctor both in the ECC and in the Emergency Teams. Regarding the make up of the Emergency Teams (an Emergency Team being a team of health professionals and non-health professionals that make up the personnel of an advanced life support (ALS) ambulance that attends emergency situations) there is no one format, although the most common is that of a 3-person team made up of doctor specialised in emergencies, a Nurse specialised in emergencies, and an Emergency Medical Technician (EMT). Andalusia is a region in the South of Spain with more than 9,000,000 citizens. It is divided in eight provinces (Almería, Cádiz, Córdoba, Granada, Huelva, Jaén, Málaga and Sevilla). Looking now at the model in Andalusia; the Health Ministry of the Andalusian government created in 1994 the "Empresa Publica de Emergencias Sanitarias-EPES" (Public Service Company for Medical Emergencies), thus taking charge of setting up 061 emergency teams in the whole of the self-governing region of Andalusia. In some provinces this model co-exists alongside some private medical emergency companies.

DIAGNOSTIC CORRELATION BETWEEN EMERGENCY TEAMS AND HOSPITALS

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Goals: To Know on one hand the diagnostic correlation degree between emergency teams (ET) and their reference hospitals; and on the other the cause of diagnosis failures. To describe the pathology attended by the ET.

Methodology: Follow up of all the patients transported by the ET of the 061 service of Almería (Spain), to their references hospitals through the clinical historial of the ET and the final clinical historial of the hospitals during 3 consecutive months. Following variables were taken into account: Age, sex, ET diagnosis (ETD), Hospital diagnosis (HD), Diagnostic correlation (DC), Admission place (AP), ET diagnosis in groups (ETDG), Hospital diagnosis in groups (HDG) and

Diagnostic failures (DF). A descriptive statistical study has been carried out.

Results: Total of patients: 241; Medium age: 56,9; Sex: Females 97 (40,2%); ETD: The main were: 32 (13,3%) Unstable angina (UA); 27 (11,2%) Arrithmia; 22 (9,1%) Lung acute edema (LAE); 20 (8,3%) Severe head injury (SHI); 19 (7,9%) Angina pectoris and 17 (7,1%) Apoplexy. HD: The main were: 25 (10,4%) UA; 25 (10,4%) Arrithmia; 22 (9,1%) LAE; 17 (7,1%) Apoplexy; 17 (7,1%) Angor pectoris; 15 (6,2%) SHI. DC: Yes: 218 (90,5%); No: 23 (9,5%). AP: Any hospital service (except emergency service) 126 (52,3%); Emergency Service: 67 (27,8%); Intensive Care Units: 48 (19,9%). ETDG: The main were: 112 (46,5%) Cardiology; 36 (14,9%) Traumatology; 33 (13,7%) Neurology. HDG: The main were: 105 (43,6%) cardiology; 36 (14,9%) Traumatology and 33 (13,7%) Neurology. DF: Out of 23 without DC, 17 (74%) were related to the clinical historial and 3 (13%) were related to the Phisical exploration.

Conclusions: A high degree of diagnostic correlation exists between emergency teams and hospitals, more or less 90%. The more frecuent pathology attended and transported by the emergency teams was the cardiological pathology. The more frecuent failures in the diagnostic correltion are generated by unstable angina, angor pectoris and chest pain, mainly due to differences in clinical historial assesments.

PREDICTIVE FACTORS FOR REVERSION TO SINUS RHYTHM IN PATIENTS WITH AURICULAR FIBRILLATION DIAGNOSED IN THE EMERGENCY DEPARTMENT

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Objectives: Auricular fibrillation is the most frequent cardiac arrythmia. To become acquainted with the factors which determine cardioversion, and how we use antiarrythmic drugs at the Emergency Department (ED).

Methods: A retrospective study is conducted on patients attended at the ED during the year 2002, diagnosed with Auricular Fibrillation (AF) of recent apparition. The following variables are analysed: age, sex, pathological history (PH), usual medication, symptoms, their time of presentation, medication administered at the ED, cardioversion and its duration.

Results: A total of 98 AF of recent apparition were detected, with an average age of 67 +-14 years (range 28-90). 56 % were male. The PH were: previous episodes of AF, 52 %; arterial hypertension (AHT), 46 %; ischemic cardiopathy, 12 %; valvulopathy, 8 %; and cardiac insufficiency (CI), 6 %. 12 % were under antiarrhythmic treatment. The main presentation symptoms were: palpitations: 56 %; thoracic pain: 30 %; syncope: 7 %; and CI: 6 %. The evolution time of symptoms, until assistance was requested, was: <24 hr for 71 % of the patients, between 24-48 hr for 17 % and >48 hr for 12 %. 2 % of the patients returned to sinus rhythm spontaneously. The drugs administered in the ED were Amiodarone (56 %) and others drugs in the rest of patients. 72 % returned to sinus rhythm. The reversion was quicker with Flecainide with 4 hours. 85 % of those under 65 returned to sinus rhythm, and only 64 % in those older without sexual differences. The delay in requesting assistance had a negative influence on the reversion. Only 50 % of those who began with cardiac insufficiency reverted. 100% of those treated with Flecainide returned to sinus rhythm, 71 % with Amiodarone, with Amiodarone + Digoxine 72 %, and with Digoxine 33 %. 77 % of the patients with a PH of previous episodes of AF returned to sinus rhythm, against 61 % of those who did not. In the rest of the PH, there was no significant difference.

Conclusions: A young patient, without structural cardiopathy, who does not delay in requesting assistance, with previous episodes of AF, and who is administered CI antiarrhythmic drugs, has more probability of recovery than another patient of advanced age, structural cardiopathy, prolonged time of evolution of AF and haemodynamic instability.

HYPERKALEMIC CARDIAC ARREST AFTER REPEATED SUCCINYLCHOLINE USE IN A PATIENT WITH RENAL INSUFFICIENCY

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Background: Succinylcholine can induce a mild and transient increase in serum potassium (K+) levels of approximately 0.5-1.0 mEq/L occurring over 10-15 minutes. Although certain populations of patients who receive succinylcholine are more susceptible to increases in serum K+ levels (ie. neuromuscular dystrophies, burn patients), there is a consensus by anesthesia that succinylcholine use in patients with renal failure is safe. We report a case of an ESRD patient who had a cardiac arrest in the setting of hyperkalemia shortly after intubation.

Case Report: A 1 year-old boy with a history of ESRD on hemodialysis S/P rejected renal allograft, severe cardiomyopathy, presented to the ED with cough and vomiting. In the ED the patient was ill-appearing and tachypneic. Initial vital signs: BP=1450/90 mmHg, P=144 bpm, T= 36.0°C, PO2 sat = 93% on room air O2. PE was significant for decreased breath sounds at the right lung field and tachycardia with a laterally displaced PMI. A chest –XR revealed a right upper and lower lobe infiltrates. The patient was initially treated with O2, nebulized albuterol, and IV antibiotics. He was intubated with ketamine 2.5 mg/kg and succinylcholine 3 mg/kg and midazolam 0.1 mg/kg due to worsening respiratory status. Because of movement while on the ventilator the patient was given another dose of ketamine and succinylcholine. In the PICU he desaturated and his heart rate decreased below 40 bpm. His laboratory data revealed: K+ = 7.4 mEq/L, Cr=9.2 mg/dl, Mg++ 3.4 mg/dL, lactate 1.2 mmol/L, arterial pH=7.29, pCO2= 42 mmHg, pO2 =148 mmHg, WBC=15, 800/mL. After CPR and treatment for hyperkalemia the patient's ECG and vital signs normalized.

Conclusions: Succinylcholine may cause transient hyperkalemia. Repeated doses of succinylcholine in the patient presented may have contributed to a cardiac dysrhythmia and should be avoided in patients with renal impairment.

FIRST EPISODE OF ATRIAL FIBRILLATION. HYPERTHYROIDISM?

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Goals: To find out the incidence of hyperthyroidism in patients undergoing a first episode of atrial fibrillation, without other symptoms of thyroid dysfunction and to assess the convenience of including thyroid function parameters in the ER laboratory tests.

Methods: Descriptive-prospective study. Data were taken from 100 patients that entered the ER following their first

episode of atrial fibrillation. Before therapeutic intervention, blood samples were taken to analyze thyroid function and immunological parameters. Patients with symptoms of thyroid dysfunction, previous thyroid pathology or former atrial fibrillation episodes were excluded from the study. In patients with confirmed thyroid dysfunction further studies were made to identify the underlying cause.

Results: The average age of the patients in the study was 69.5 „b 13.7 years (37 males, 63 females), 7% of the patients had hyperthyroidism. In this group of patients, 71.4% had undetectable levels of TSH but total T3 and free T4 levels were normal. Causes of hyperthyroidism were distributed as follows: 2 autonomic nodules, 4 multinodular goiters, 1 silent autoimmune thyroiditis. Immunologic anomalies were detected in 10.8% of patients with normal thyroid function. There were no significant differences between the euthyroid patients and the patients with hyperthyroidism regarding age, sex, cardiac output or previous heart disease. Under pharmacological treatment, 85.7% of the patients with hyperthyroidism returned to normal sinusal rhythm versus 51.1% of euthyroid patients. In the group of patients with hyperthyroidism, 4 cases restored sinusal rhythm under treatment with amiodarone, and the remaining cases restored sinusal rhythm without using amiodarone.

Conclusions: 1.) The incidence of subclinical-clinical hyperthyroidism in patients undergoing the first episode of atrial fibrillation, without other symptoms of dysfunctional thyroid, was 7%. 2.) In this study, those patients having a higher risk of hyperthyroidism could not be identified. 3.) 86% of patients with hyperthyroidism restored sinusal rhythm with the protocolized anti-arrhythmic treatment. 4.) Given the low incidence of hyperthyroidism and the good response to pharmaceutical treatment, we believe an urgent analysis of thyroid function is unnecessary, although this should be done in a later follow up.

CRISIS HIPERTENSIVAS: TRATAMIENTO EN URGENCIAS Y SEGUIMIENTO NEFROLÓGICO. ESTUDIO PROSPECTIVO DE 60 PACIENTES

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Objetivo: Evaluación de un protocolo conjunto de manejo y seguimiento de las crisis hipertensivas.

Metodología: Estudio prospectivo durante 16 meses, se incluyeron en el estudio todos los pacientes con una urgencia hipertensiva, definida como cifras de presión diastólica (PD) - 120 mmHg en dos determinaciones, después de 30 minutos en reposo y sin signos de afectación de órganos vitales. Tratamiento en Urgencias (SU) 50 mg de captopril oral. Criterios de ingreso hospitalario: Alteraciones en la analítica básica de urgencias o en la exploración física o reducción insuficiente de la PD dos horas después de la administración del captopril. Se realizó seguimiento de los pacientes en la consulta externa de Nefrología.

Resultados: Se recogieron datos de un total de 60 pacientes, 36 varones (60%) y 24 mujeres (40%), con una prevalencia del 0,20% de las urgencias de medicina (29.996) durante el estudio. 21 pacientes (35%) estaban asintomáticos, 10 pacientes (16,7%) no se conocían hipertensos. Realizaban tratamiento farmacológico 35 pacientes (70% de los hipertensos conocidos), con un buen cumplimiento 11 casos (31,42%). Adecuado cumplimiento higiénico-dietético 5 casos (10%). La edad promedio fue de 55 años (32-81), distribución por edades y sexos: edad 31-40 41-50 51-60 61-70 71-80 > 80 varones 4 15 10 4 3 - mujeres 2 4 5 11 1 1 Las presiones promedio al ingreso en urgencias fueron de 215 la sistólica (PS), 128 la PD y 157 la media (PM). La disminución de la presión al alta de urgencias fue, de 17,7% (22,9 mmHg) la PD y 18,10% (28,7 mmHg) la PM. Ingresaron 25 (42,7%) de los pacientes, 5 por no descenso de la tensión arterial (TA), 11 por alteraciones clínico-analíticas y 9 por persistencia de sintomatología. Seguimiento de los pacientes: (51/60, 85%), en la consulta externa de nefrología, la PD media fue de 90,65 - 10,06 mmHg, disminución respecto a la PD al alta del SU de 14,86 mmHg - 12,51 mmHg. Hipertrofia septal (grosor > 11 mm) en la Ecocardiografía en 31 casos (81,6%) de 38 estudiados. Estenosis de arteria renal, un caso. Biopsia 3 casos por proteinuria > 2g/dia (dos nefroangioesclerosis, uno cambios mínimos).

Conclusiones: Hemos detectado una baja prevalencia de la urgencia hipertensiva. El cumplimiento terapéutico y higiénico-dietético se ha evidenciado muy deficiente. El seguimiento de los pacientes permite la detección de los casos de hipertensión secundaria, detección de nuevos casos y un estudio y un control adecuados de las repercusiones sistémicas.

MANEJO DEL TRAUMATISMO AGUDO DE TOBILLO DE ETIOLOGIA DEPORTIVA EN EL SERVICIO DE URGENCIAS DEL HOSPITAL UNIVERSITARIO DE PUERTO REAL

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Objetivos: Realizar un estudio descriptivo, longitudinal-prospectivo sobre el manejo del traumatismo agudo de tobillo (TAT) en el Servicio de Urgencias (SU) del Hospital Universitario de Puerto Real (HUPR). Población a estudiar pacientes entre 18´40 años que hayan sufrido TAT de etiología deportiva.

Metodologia: La exploración clínica fue realizada por los facultativos encargados de la sala de traumatología del SU del HUPR. La recogida de datos fue obtenida por un único investigador a través de las historias clínicas y encuestas telefónicas personalizadas. Las radiografías fueron reevaluadas por un único traumatólogo (Jefe de Sección de Cirugía Ortopédica y Traumatológica).

Resultados: Las características antropomórficas de la población en estudio es la que sigue: 58,2% hombres/ 41,8% mujeres. Edad media. 28,5 años. Altura 1,70 cm. Peso: 73,8 kg Actividad deportiva: Más de un 60 % fútbol y marcha. Se realizan radiografías aproximadamente en un 90% de casos, de ellas sólo fueron clínicamente significativas un 8,5%. El tiempo de estancia en el SU fue de 3,4h, siendo la satisfacción del usuario adecuada en la mayoría de los casos. El tratamiento analgésico e inmovilizador sigue unos criterios similares no así el rehabilitador y profiláctico trombótico. El seguimiento de los pacientes se hace casi por igual por médicos de cabecera y traumatólogos de zona, existiendo una concordancia en el diagnostico al control posterior de cerca del 90%.Las incapacidades laborales que provoca esta patología son importantes, perdiéndose de media de 1 a 3 semanas en un 44% de pacientes que necesitan esta incapacidad transitoria laboral.

Conclusiones: El estudio radiológico es excesivo en esta patología y su rendimiento diagnóstico es escaso. El tratamiento analgésico e inmovilizador sigue unos criterios de indicación uniformes, no así el antitrombótico y rehabilitador.

La satisfacción general del usuario es adecuada pero el tiempo de espera es inadecuado.

EFFICACY AND SAFETY OF AN EMERGENCY DEPARTMENT SHORT-STAY UNIT IN THE TREATMENT OF PATIENTS WITH ACUTE CORONARY SYNDROME

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Acute coronary syndrome (ACS) is a frequent diagnosis seen in the Emergency Department (ED). Most of these patients require only pharmacological therapy to be clinically stabilized. An ED Short-Stay Unit (EDSSU) is an alternative to in-patient hospitalization for acute care.

Objectives: To describe the demographic and clinical characteristics, and to evaluate the efficacy and safety of the management of the ACS patients admitted to the EDSSU.

Methods: A retrospective analysis of the charts of the patients admitted to the EDSSU from Nov 11th 2002 to Mar 15th 2003 diagnosed as having ACS was made by two ED physicians. The efficacy and safety were evaluated by means of the treatment give, the mortality rate, the unscheduled ED returns and the hospital readmission rate within 10 days of home discharge from the unit.

Results: We analyzed 31 ACS episodes in 29 patients admitted to the EDSSU with ACS as a first diagnosis. Nine (32%) of them were men and 20 (69%) were women. Median age was 83.6 years (range 59-96) and the mean length of stay was 3.5 days (range 0.5-5). Electrocadiography findings were ST segment elevation in 6 episodes (19%); ischaemia signs without ST segment elevation in 17 episodes (55%); normal ECG in 2 episodes (7%) and 6 (19%) indeterminate. Biochemical markers were positive (troponin I < 0.2ug/L) in 22 episodes (70.9%). Non-Q-wave myocardial infarction (troponin I > 2ug/L) was diagnosed in 8 episodes. All episodes were treated with intravenous nitrates; 83% (26/31) with antiplatelet therapy; 61% (19/31) with low-molecular weight heparin and one episode with thombolysis (streptokinase). ACS patients were transferred to a conventional unit in 6 episodes. Ten days after EDSSU discharge, four patients (4/29) were readmitted in the hospital. No patient died.

Conclusions: The EDSSU is an effective and safe alternative to in-hospital management for patients presenting to the ED with an ACS and not requiring any immediate invasive therapy.

EPILEPTIC SEIZURES IN EMERGENCY DEPARTMENT: MULTIVARIATE ANALYSIS

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Objective: We sought to analyze patients who attended the emergency department (ED) after having epileptic seizures (ES) to evaluate the differences, clinical features and tests performed to establish the admission criteria.

Methods: We reviewed the patients´ records from people attended at the ED because of ES during six months, from September 2002 to February 2003. Statistical analysis: Chi-square and t-student were applied. A multivariate logistic regression analysis was performed to build a predictive pattern as a tool to distribute the patients into two groups (group A: inpatients, group B: outpatients).

Results: Patients evaluated: 108 (group A: 51, group B: 57). Mean age: 49.9+/-19.0 years in group A and 45.4+/-21.1 in group B (no Statistical Difference-SD). In group A, 52.9% reported a history of epileptic disease and 64.9% in group B (no SD). In group A, 14 patients (27.5%) suffered a partial seizures and in group B, 6 patients (10.5%) (SD p=0.024). Epileptic abnormalities on EEG were recorded in 25 patients (49%) in group A, and 3 (5.3%) in group B (SD p<0.0001). In group A, 23 patients (45.1%) showed pathological findings in the neuroimaging (NI) studies and 9 (15.8%) in group B (SD p=0.001). The number of seizures were 1.98+/-1.49 in group A and 1.26+/-0.61 in group B (SD p=0.02). Furthermore, in the multivariate analysis we obtained the consequent formula: Logit= -0.759 + 2.852 EEG -(0.355 + 2.526 antecedent) NI –0.927 antecedent + 0.12 age + 0.325 number of seizures – 0.905 type of seizures.

Conclusion: Abnormalities in the EEG or in NI were the most influential factors in deciding the need for admission of the patients attended at the ED.

RHABDOMYOLYSIS IN ACUTE INTOXICATIONS

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Objectives: To determine whether rhabdomyolysis (RM) diagnosis can be a predictive factor of potential severity complications in patients admitted to the Emergency Department (ED),with acute intoxication (AI) and altered state of consciousness.

Methods: A prospective study was conduced with patients admitted to our Emergency Department from an urban area due to AI. A descriptive analysis of several variables was performed including age, sex, toxic substances involved, clinical manifestations (basic neurologic examination and Glasgow coma scale), diagnostic, treatment and causes of hospital admission. The blood samples of these patients were analyzed, using a series of serum creatine phosphokinases (CPK) and biochemical detection items during 24 hour. RM was defined by a serum CPK level of more than 170U/ml.

Results: A total of 30 cases of AI were attended in ED; 26 male with mean age 35 years and 4 female with mean age 43 years. Leading toxic agents were: alcohol alone (n=9), opioids combined with cocaine (n=4), benzodiazepines (BZD) alone (n=4) and opioids combined with BZD (n=3). More than one drug had been taken in the rest of the cases. Fifteen cases were hospitalized (diagnosis of RM was reported in 14 of these). We also observed four patients with RM induced acute renal failure (ARF) associated with opioids alone or in combination with other drugs (sedatives or stimulants).

Conclusions: 1.The development of RM is a significant complication of AI and is the most frequent cause of hospital admission. The serum CPK level was elevated in all of these patients, which is a good marker for RM and an effective way to raise the diagnosis rate and improve the prognosis. 2.Acute renal failure occurs in cases of opioids-associated RM. Clinicians should have a high index of suspicion for RM in patients with acute opioid intoxication but also in other AI, predicting those patients in whom aggressive therapy should be initiated to minimize the complications of RM. Routine serum CPK levels should be checked on patients at risk.

B-TYPE NATRIURETIC PEPTIDE IN THE DIAGNOSIS OF HEART FAILURE IN THE EMERGENCY DEPARTMENT

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Objective: To asses the role of B-Type natriuretic peptide (BNP) in the diagnosis of heart failure in patients with acute dyspnea.

Methods: 40 patients were included in a prospective (diagnostic test evaluation) study conducted from March to June 2003 in the Emergency Department of the Dr. Peset Hospital (Spain). Inclusion criteria: patients over 18 years of age referring dyspnea as the main complaint without previous history of congestive heart failure (CHF). Exclusion criteria: advanced renal failure (creatinine clearance <15 ml/min), acute myocardial infarction and overt cause of dyspnea (including chest wall trauma or penetrating lung injury). Data collection: baseline demographics, clinical history, physical examination, electrocardiogram, chest X-ray, laboratory test and BNP plasma levels. A blinded transthoracic echocardiography was performed in each patient for detection of the left ventricular dysfunction. Statistical analysis: baseline characteristics were reported in counts and proportions or mean + SD values. Univariate comparisons were made with X2 or 2-sample t test and decision statistics computed from 2x2 tables.

Results: Mean age 68.6 + 14.2 (range 49-84) years; 25 (62.5%) women and 15 (37.5%) men. The final diagnosis was: CHF in 27 (67.5%); chronic obstructive pulmonary disease 9 (22.5%); pulmonary embolism 3 (7.5%); anemic syndrome 1 (2.5%). At a cut off 150 pg/ml, BNP had a sensitivity of 90% and specificity of 77%. The negative predictive value was 77% for diagnostic of CHF.

Conclusion: Used in conjunction with other clinical information, measurement of BNP is useful in stabliushing the diagnosis of CHF in patients with acute dyspnea.

DIGOXIN TOXICITY AND RISK FACTORS IN THE EMERGENCY DEPARTMENT

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Objectives: To determine the risk factors and the frequency of clinical manifestations with elevated serum digoxin concentration (SDC) in patients in the Emergency Department.

Methods: 39 patients over 18 years were evaluated with elevated SDC (>2.6 nmol/L (>2.0 ng/ml)) monitoring at least 6 h after administration of the last dose and measured using immunoassay technology in the Emergency Department of a General Hospital in Spain during 2002-2003 period. Exclusion criteria: uninterpretable data, previous treatment with digoxin specific Fab antibody fragments, "predistributional" serum samples and dyalisis patients. Data on patients demographics, serum chemistry values, indication for digoxin treatment, clinical evidence of digoxin toxicity (symptoms and elctrocardiographyc changes) and digoxin dosing data were collected. Statistical analysis: Nominal data were analyzed using X2 or Fisher exact test. Continuous variables by Student t test and analysis of variance with multiple t test and Bonferroni correction for all significant findings. Level of significant was set at $p<0.05$. Results: Mean age 72.6 + 13.4; 29 (74.3%) women and 10 (25.6%) men. 34 (87.1%) patients had at least 1 clinical manifestation of digoxin toxicity. Nausea and vomiting were the most common symptoms. We found and statistical significant association between age (p 0.027), heart failure (p 0.030), deteriorating renal function (p 0.018) and elevated SDC. Electrolyte abnormalities not differed significantly ($p>0.05$).

Conclusions: Diagnosis of digoxin toxicity remains difficult because sings and symptoms are non specific, so we may suspect toxicity in those patients with deteriorating renal function or advance congestive heart failure.

ORAL COLESTIRAMINE USEFULNESS IN PATIENTS WITH DIGOXIN TOXICITY

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Objective: To assess the effectiveness of two oral protocols of cholestyramine administration in patients with signs and symptoms of digoxin toxicity.

Patients and Methods: We conducted a retrospective study of 90 patients admitted to our hospital between 2002 and 2003, all with digoxin plasma levels = 2 ng/ml. Exclusion criteria: uninterpretable data, previous treatment with digoxin-specific antibody fragments (Fab), patients on hemodialysis, rebound effect during treatment with cholestyramine, patients with only one value of Cp and serum samples obtained in the distribution period. Oral cholestyramine schemes: A: 4 grams every 6 hours until digoxin levels <2 ng/ml and B: 1 gram every hour during the first 6 hours, followed by 4 gram every 6 hours until digoxin levels <2 ng/ml. Effectiveness evaluation: Digoxin extraction coefficient (E%) at 24 hours: E%= 100 (Cpo-Cp24h) / Cpo. Cpo= Cp initial; Cp24h = Cp experimental after 24h. We used the Student's t-test to examine the quantitative parameters and the c2 test for the qualitative ones.

Results and Discussion: 29 patients (32%) fulfilled the inclusion criteria. Risk factors for digoxin accumulation were: advanced age (mean 81.5 years), impaired renal function (mean creatinine clearance 31.5 ± 11.5 ml/min), enhanced by weekly doses administration of digoxin (1.25 to 1.75 mg) in most of the patients (65.5%; CI 95% 48.2-82.8). Internal factors (anthropometric characteristics, renal function) and external (pharmacological interactions) were similar in patients receiving scheme A (n=21) and patients receiving scheme B (n=8). Scheme A and B extraction coefficient (E%) 24 hours after cholestyramine administration was 30%, independently of the initial Cp.

Conclusions: Body digoxin elimination in patients with digoxin intoxication following scheme A, seems to have the same effectiveness and is less complex than scheme B. The inclusion of more patients in the study will definitively help to confirm this hypothesis.

CLINICAL VALUE OF BRAIN NATRIURETIC PEPTIDE DETERMINATION IN EMERGENCY DEPARTMENT

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Background: Brain Natriuretic Peptide (BNP) is secreted as a prohormone (proBNP) from the left ventricle in response to an increase in ventricular pressure. It can be measured in blood or plasma as BNP or NT-proBNP (the N-terminal fraction of the prohormone) using ECLIA (electrochemical luminiscent method)

Aim: To establish the clinical value of NT-proBNP detection in the diagnosis of Cardiac Insufficiency (CI) in an Emergency Department (ED). To determine the intrinsic value (sensitivity and specificity) and the predictive value (positive and negative) of the test. Methods: Descriptive analysis. Thirty patients who came to the ED because of dyspnea III-IV of NYHA. NT-proBNP was measured by ECLIA (Elecsys, Roche) before any treatment was given in the ED. Diagnostic criteria: Framingham criteria for CI and usual spirometic criteria for chronic obstructive pulmonary disease (COPD). After performing the usual test in the ED, patients were classified as follows: Group 1:COPD without CI; Group 2: Right ventricular insufficiency due to COPD and Group 3: Left ventricular insufficiency. Statistical analysis was performed using SPSS 10.0. NT-proBNP levels are presented as median and percentiles (25th ; 75th). To compare NT-proBNP levels in group 3 (CI) vs. Groups without CI we used the Mann-Whitney U test. ROC analysis for diagnosis of CI.

Results: Mean age: 68.4 years (standard deviation 11.8). CI was diagnosed in 16 patients (53.3%). NT-proBNP median and 25th; 75th percentiles values were: Group 1: 443(110; 843) pg/ml; Group 2:740 (374; 807) pg/ml, and group 3: 2641 (2290; 3842) pg/ml, in two of them the diagnosis of CI was not initially established in the ED (Kappa: 0.88). The values of NT-proBNP were higher in patients with CI (2641; 2290/3842 pg/ml) vs. without CI (596; 149/772 pg/ml.) ($p<0.01$). The area under the ROC curve for CI was 0.96 (95 % CI: 0.89 to 1). No patient with CI showed levels of NT-proBNP above 300 pg/ml. (NPV 100%). A NT-proBNP cut-off value of 1500 pg/ml, showed sensitivity of 94%, specificity of 93%, PPV= 94% and NPV= 93%.

Conclusions: 1. Making a diagnosis of Cardiac Insufficiency is sometimes difficult in the Emergency Department. 2. The high negative predictive value of NT-proBNP test makes it possible to exclude cardiac insufficiency as cause of dyspnea. 3. Higher levels of NT-proBNP may help diagnosing a non-suspected cardiac insufficiency.

DAMAGE CONTROL SURGERY IMPROVES CARDIOVASCULAR AND RESPIRATORY FUNCTION IN HIGH ENERGY TRAUMATIC SHOCK

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Purpose: To study the effects of damage control surgery on cardiovascular and pulmonary function in high-energy traumatic shock. Methods: 15 anesthetized pigs, 10-12 weeks old were divided into two groups. The Conventional Surgery group (CS, n = 8) had high-energy missile injury 15 cm above the symphysis pubis and 10 above midline. Small bowel injuries were treated with resection anastomosis. Damage Control group (DC, n = 7) was treated by resection and ligation of the bowel injuries. Measured variables included intravascular pressures, cardiac output, vascular resistance, lactic acid, blood gases and saturation.

Results: High energy caused traumatic shock in both groups with reduced cardiac output and lactic academia. The DC group had significantly higher central venous pressure ($p < 0.01$) and cardiac output ($p <0.02$) and had less tachycardia ($p <0.002$). The rise in systemic and pulmonary vascular resistance was significantly reduced in the DC group compared with the CS group ($p <0.001$). Haemoconcentration was significantly less in the DC group ($P<0.005$). Damage control group had significantly higher arterial blood oxygenation ($p < 0.005$) and less oxygen extraction ratio ($P< 0.02$). There was a trend for reduced lactic academia in the DC group at the end of the experiment.

Conclusions: Damage control surgery improves cardiovascular and respiratory function in high-energy traumatic shock.

PENETRATING CARDIAC INJURY

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Penetrating cardiac injury (PCI) is being encountered with increasing frequency in different parts of the world. All trauma centres should be accustomed with the management of PCI as it usually does not allow time for referral. Management of PCI is discussed with a review of a series of 34 cases done in South Africa. Mode of injury, condition on arrival, resuscitative measures, lab values, investigations and definitive treatment were considered. A comparison of outcome was done between the group who had echo or not and those who received emergency thoracotomy or not. Out of 34 patients who had suspected PCI, six patients had echo, four had ultrasound; twenty-four patients did not have any echo or ultrasound.

Patients having positive echo revealed blood in the pericardium; two patients having negative echo had follow-up echo done with further negative results and suffered no complications. Three patients had emergency thoracotomy; one survived in vegetative state, two died in E.R. Twenty-nine patients had sternotomy, and all survived. Echo may be of good help when patient is stable. They yield better results. Ultrasounds are much quicker and show a high accuracy rate. Emergency thoracotomy should only be performed as a last resuscitative measure. Patient should be triaged to the operating theatre in all possible circumstances. An isolated PCI with a stab wound may not be a fatal injury in a hospital accustomed to such management.

PROSPECTIVE RESEARCH OF CRANIOENCEPHALIC TRAUMA TREATED IN AN EMERGENCY WARD OF A LOCAL HOSPITAL

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Objective: To find out the severity of cranioencephalic trauma (CET) which are treated in an Emergency Ward of a local Hospital.

Methods: Prospective research has been prepared, during April and May 2002, to collect data from patients with a CET consultation, who visited the Emergency Ward (without specific Neurosurgery Service). The following data has been collected: age and gender, injury mechanism, clinical manifestations (referred symptoms, pupillary functions, neurological symptoms, external lesions, and associated trauma), trauma score (TS) complementary data (analytical results, radiographic studies, CAT scan) and destination of the patient (discharge, observations, admission or taken to another Hospital).

Results: During the research 70 patients files have been studied: 50(71,4%) were male and 20(28,6%) female. Average age was 36,61±12,44 years old. 11 (15,71%) patients were under 14 years, 46 (65,72%) were between 15 and 65 and 13 (18,57%) were over 65 years old. 67 (95,71%) patients were discharged directly from the Emergency Ward, 12 (17,14%) were under observations in the Emergency Ward for 24 hours and afterwards they were discharged and 5 (7,15%) were taken to a Neurosurgery centre. 12 CAT scan were taken (17,52%), 9 (75%) of them were normal and 3 (25%) abnormal. 2 patients had neurological symptoms and both CAT scans were pathological. In the 3 abnormal cases we observed: cranial fracture, hemispheric haematoma, and subarachnoid haemorrhage plus brain internal bleeding. 38 (54,28%) had CET without other lesions, 11 (15,73%) had cervical trauma, 7 (7%) had trauma of the limbs; 2 (2,85%) had thoracic trauma, 1 patient (1,42%) trauma of the abdomen; 10 patients (14,30%) had minor lesions.

Conclusions: The majority of CET cases are minor and they could be treated on a lower priority level. The existence of neurological symptoms is the only predictor of CET severity.

CORTICOSTEROID RANDOMISATION AFTER SIGNIFICANT HEAD INJURY: PROGRESS IN THE MRC CRASH TRIAL AFTER 5,000 PATIENTS

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The MRC CRASH Trial is a randomised placebo-controlled multi-centre trial of a 48-hour corticosteroid infusion following brain injury. All adults within eight hours of brain injury who are observed whilst in hospital to have GCS of 14 or less (out of a maximum scale of 15), are eligible for trial entry. The main phase of the CRASH Trial began in March 2001 following a successful pilot phase. By 21 March 2003, 140 hospitals from 39 countries were participating in the trial and together had recruited 5,000 patients. 4,015 (80%) patients were male and 985 (20%) were female. 1,458 (29%) patients had mild head injury, 1,482 (30%) had moderate head injury and 2,060 (41%) had severe head injury (Figure 1). 3,039 (61%) patients were randomised within 3 hours of injury (Figure 2), indicating that these patients were likely to have been randomised within emergency departments. At the time of writing, outcome at two weeks from injury was known for 4,796 (96%) patients, of whom 920 (19%) patients died. Six-month follow-up for the first 2,500 patients was also nearly complete. Vital status was known for 2,268 (91%) of the 2,500 patients, of whom 548 (24%) had died. Functional status based on the Glasgow Outcome Scale was known for 2,250 (90%) of the 2,500 patients: 24% were dead, 15% were severely disabled, 21% were moderately disabled and 40% had made a good recovery.

The CRASH Trial is now the largest head injury trial ever conducted. The efforts of the randomising departments and National Coordinators are greatly appreciated. It is possible to enroll and follow up very large numbers of patients with brain injury. We shall be accepting applications from hospitals wishing to join the CRASH Trial until February 2005.

SHOULD WE BE GIVING INTRAVENOUS FLUIDS TO VICTIMS OF BLUNT TRAUMA?

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Objective: To determine whether or not fluid resuscitation impacts on the survival of blunt trauma patients. Subjects: Patients submitted by hospitals through out England and Wales to the TARN database between 1989 – 2000. Patients were injured by blunt trauma and subsequently required surgery for their injuries. Outcome: Odds of death after injury for patients administered 501-1000ml, 1001-1500ml, 1501-2000ml, >2000ml of fluid resuscitation prior to surgery compared to those receiving <500ml. Odds of death were adjusted through multiple logistic regression for variation between groups in injury severity score (ISS), age, and revised trauma score (RTS).

Results: 3684 patients met the inclusion criteria. The case mix adjusted odds of death in patients receiving >2000mls vs <500mls of fluid prior to theatre was 1.78 (95%CI 119 - 2.59). No significant survival differences were seen for lesser fluid volumes.

Conclusion: High volume fluid resuscitation is associated with greater mortality in blunt trauma patients requiring surgery after adjustments for case mix.

MEASURING THE EFFECT OF ACUTE SUBDURAL HAEMATOMA VOLUME ON MIDLINE SHIFT AND ITS CORRELATION TO PROGNOSIS

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Objective: To estimate outcomes of patients with acute subdural hematoma (ASDH) by analysing the hematoma volume, its thickness and midline shift. To test an imaging program, the "Osiris", by University of Geneva, to measure ASDH volume, thickness and midline shift on the first emergency CT scan.

Materials and Methods: Twenty-eight patients with isolated unilateral ASDH were retrospectively studied by calculating hematoma volume, hematoma thickness and midline shift using an imaging program (Osiris). Patients' outcomes were scored according to the Glasgow Outcome Scale (GOS). For each patient we considered only the first emergency CT scan. CT parameters were correlated with GOS at the 6^{th} month evaluation. According to their GOS the patients were further divided in two groups (GOS 3-4-5 and GOS 1-2). Data are expressed as mean values with standard deviation and as median value; Student's t- test was used for statistical analysis.

Results: The overall mortality rate was 32%. At the six month examination, recovery was almost complete (GOS 4-5) for 9 patients (32%), a severe disabilty (GOS 3) occured in 6 cases (21%) and neurological deficit (GOS 2) persisted in 1 patient. The hematoma volume ranged from 0.8 to 320 mm^3. Patients who died had a median hematoma volume of 129 $\pm$ 103 ml. There was no statistically significant difference among the GOS related groups. The hematoma thickness ranged from 6 to 30 mm. The results obtained from the analysis of the hematoma thickness were similar and did not show significant differences among the outcome related subgroups. The midline shift ranged from 0 to 19.2 mm. Patients who died and those with a severe disability had a larger shift (12.07 $\pm$ 4.97 mm) than patients with good outcomes (7.1 $\pm$ 5.17 mm) (t=0.008). We found no correlation between the hematoma volume or its thickness and the size of the midline shift.

Conclusion: Midline shift after ASDH is associated with a bad prognosis even in the absence of parenchymal contusions. The hematoma volume and its thickness are not correlated with the degree of consensual midline shift since bilateral diffuse cerebral swelling may contribute to the mass effect. Hematoma volume is not of additional prognostic value.

HOSPITAL RESOURCE UTILIZATION BY OBESE AND NON-OBESE ADULT EMERGENCY DEPARTMENT PATIENTS WITH ABDOMINAL PAIN

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Objectives: A steadily increasing proportion of adults in the United States are obese. The ED evaluation of obese patients with abdominal pain may involve more diagnostic studies and personnel time than the ED evaluation of non-obese patients with abdominal pain. To date no studies have examined the unique needs of obese ED patients with abdominal pain. Our objective was to assess whether the diagnostic evaluation of obese adult ED patients with abdominal pain requires more hospital resources than the diagnostic evaluation of non-obese adult ED patients with abdominal pain.

Methods: Prospective, observational study of adult ED patients with a chief complaint of non-traumatic abdominal pain. Collected data included: demographics, ED procedures, time in the ED, radiographic and laboratory studies performed, consultations, operations, and disposition. Obesity was defined as a body mass index greater than 29 kg per meter squared. Between group comparisons were accomplished with chi-squared and student's t-test.

Results: 101 patients were enrolled, 48 in the obese group and 53 in the non-obese group. 31% of the obese group and 50% of the non-obese were female. Obese patients had more pre-existing diabetes and hypertension ($p = 0.01$, $p = 0.04$), and had a trend toward more prior abdominal surgeries ($p = 0.10$). There were no significant differences between the groups in their likelihood of receiving any radiographic or laboratory tests. There were also no differences in consultation ($p = 0.51$) or hospital admission ($p = 0.36$). Admitted patients were equally likely to have an operation ($p = 0.35$).

Conclusions: Unexpectedly, we found no differences in the diagnostic evaluation, resource utilization, or disposition of obese and non-obese adult ED patients with abdominal pain. Given the progressively expanding segment of the US population that is obese, this finding should be validated by further studies.

OUTDOOR EMERGENCY ROOM WITH A NEW TRIAGE ALGORITHM AS A RESOLUTION FOR THE SARS EPIDEMIC

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Background: Taiwan has not been spared in this SARS epidemic. Several medical institutes have been closed temporarily because some medical staff developed SARS-like symptoms. To maintain the emergency department (ED) normally operating and serving the civilians in panic is the objective.

Methods: Disaster response team of ED was activated and built an outdoor emergency room (ER) right before the other two medical center ED were closed under the suspicion of intra-ER transmission. Findings: The outdoor ER design with a new triage algorithm has operated well serving more than 3000 patients, including 20 probable cases that kept our ED running safely and efficiently throughout the critical period as the only medical center ED for the three million population. For the first three weeks after the outdoor ED operated, the number of patients has increased from 89 per day to about 173 per day. Average staying time in the ER is 212.4=A1=D3210.5 min; which is faster than compared to before this epidemic (292.3=A1=D3519.6 min). Daily admission to the wards was 28.5 per day; to ICU was 4.5 per day. 2.2 Suspect cases and 0.30 probable cases were diagnosed daily. No intra-ER or intra-hospital infection has been detected under the strict surveillance of the infection control committee.

Interpretation: Considering the safety and efficiency, an outdoor ER with the new triage algorithm seems mandatory for any ED facing the brunt of SARS, especially in the developing countries.

A NEW INTERDISCIPLINARY CONCEPT USING TELEMEDICINE IN THE MANAGEMENT OF STROKE PATIENTS

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Objective: Patients suffering from acute stroke may be candidates for thrombolytic therapy within a very short time frame. Therefore, early and reliable examination and diagnosis are essential for successful and specific therapy. In the following study a new approach in pre-/ early in-hospital management of stroke patients using telemedicine, clinical investigation in combination with a multimodal CT scan protocol as part of an interdisciplinary co-operation (emergency medicine, neurology and radiology) is presented.

Method: A digital video sequence including sound (.3GP-format, 95kB) of stroke symptoms using Cincinnati Prehospital Stroke Scale (CPSS) was recorded and immediately transmitted by an emergency physician on scene to the in-hospital neurologist with a newest generation mobile phone (NOKIA 7650, Video Messaging Software V3, Nokia/Finland). For detection of cerebral ischemia an ultra-fast multimodal CT protocol was performed (native, perfusion and CT-Angiography with 3D-Reconstruction) in order to select patients who may benefit from early fibrinolysis.

Results: Mean time for recording a video sequence (including informed consent) was 3:30 min in ten stroke patients. In all cases the time to transmit the data via MMS/GPRS was shorter than 55 sec. CPSS video documentation correlated well with the in-hospital stroke symptom assessment (observer agreement 90%). The CT scan was performed within 15 min and took another 5 min for interpretation.

Conclusion: Telemedicine and clinical investigation in combination with a multimodal CT imaging protocol represents a valuable tool in the initial management of cerebral stroke. By shortening the pre-therapeutic interval the neurological outcome of patients with stroke may be improved.

ASSESSING AND IMPROVING KNOWLEDGE OF HEART ATTACK SYMPTOMS IN THE ED

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Introduction: The objective of this study was to determine whether providing patients in the ED with an education pamphlet on heart attack symptoms will improve their awareness of these symptoms.

Methods: A convenience sample of 100 subjects from an inner city level one pediatric and adult 45,000 teaching ED was interviewed. Inclusion criteria was ED patients 18 years and above with stable vital signs. Exclusion criteria were inability to complete the survey, intoxication, lack of a phone, and patients with hearing or speech impairment. Subjects completed a demographic and knowledge based questionnaire on heart attack symptoms. Following the survey, an American Heart Association (AHA) pamphlet entitled, Signs of a Heart Attack, was distributed and the classic warning signs of a heart attack were reviewed with the patient by the research fellow. Patients were then contacted one week and again after four weeks by phone in order to evaluate their retention level. This study was IRB approved.

Results: A total of 143 eligible patients were approached. Five refused, seventeen spoke only Spanish (and no interpreter was available), and three had no phone. Demographic data for the 118 surveyed patients was as follows: male, 49.2%; African American, 65.3%, Hispanic, 23.7%;, Caucasian, 9.3%; mean age, 44.9 years. The number of subjects getting 4-6 correct answers went from 51.7% at the original interview (time 0) to 78.5% after one week (time 1) to 84.9% after four weeks (time 3). The number getting 0-2 wrong answers went from 65.2% at time 0, to 71.5% at time 1, to 71.2% at time 3. Chest pain was the most frequent correct answer at all times tested (time 0:-86.4%, time 1:-97.8%, time 2: – 98.6%), while the most frequent wrong answer was palpitations at time 0 and time 2 (40.7%, 35.6%) and heartburn at time 2 (40.9%). At the one week follow up, the Wilcoxon signed-rank test showed a significant difference in the correct answers between time 0 and time 1 (Z=-4.189, 2 tailed, p=.000), but no significant difference between time 1-2 (Z=-.393, 2 tailed, p=.348). There was a significant difference in the responses for correct answers and wrong answers between men and women at time 0 that was not sustained at time 1 or time 2.

Conclusion: Efforts to improve the number of correct responses by providing patients with an educational pamphlet in the ED proved to be beneficial over time.

PLANNING EMERGENCY MEDICAL SERVICES FOR CHILDREN IN BOLIVIA: THE USE AND RESULTS OF A RAPID ASSESSMENT PROCEDURE TO ESTABLISH DEFINITIONS AND PRIORITIES AMONG POTENTIAL USERS AND PROVIDERS OF SERVICES

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Objectives: To obtain social and cultural data about possible promoters and obstacles affecting the development of a program of Emergency Medical Services for Children (EMS-C) in La Paz, Bolivia. The points-of-view of those most affected were sought, including potential consumers and providers of EMS-C.

Methods: a Rapid Assessment Procedure (RAP) was conducted. RAP is a qualitative ethnographic technique that permits delineation of major social, cultural, and behavioral themes about a population based on members' lived experience. Through the use of in-depth interviews and participant observation, RAP provides information in a rapid fashion, and enhances the likelihood of successful implementation of interventions and services before major investments in infrastructure are made.

Results: Information collected from providers, administrators, and consumers revealed four major themes affecting the delivery of EMS-C: 1) Nature of injuries and illnesses in the ED - root causes were generally held to be related to the

physical and emotional effects of poverty; 2) Inappropriate use of emergency departments - health care providers and consumers differed in their identification of valid reasons for utilizing EMS-C; 3) Coordination, organization, and standardization of care - both groups keenly felt their absence; and 4) Training and specialization - particularly the provider respondents felt that EMS-C would require radical changes in the system of training physicians, nurses, and prehospital providers. An expected theme, Prevention and Advocacy, did not emerge, and respondents did not appear to feel that health care providers had any role in affecting public policy.

Conclusions: RAP methodology provided a detailed picture of current emergency medical services for children in La Paz, including viewpoints from all major stakeholders. Similarities and differences in the understanding of health and health care issues between providers and consumers were identified. This information will be used to support a preliminary plan for the development of a new generation of leaders in Emergency Medicine who will implement programs that are Bolivian-driven, culturally appropriate, and socially feasible.

INTIMATE PARTNER VIOLENCE AMONG MEN PRESENTING TO A UNIVERSITY EMERGENCY DEPARTMENT

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Objective: We sought to establish the prevalence, define the nature, and identify demographics of intimate partner violence(IPV) towards men presenting to a university emergency department(ED).

Methods: This survey study was conducted at a tertiary, academic, level I trauma center with an ED that has 36,500 visits per year, from September 2001 until January 2002. The confidential written survey consisted of 16 questions previously validated in the Colorado Partner Violence Study, Index of Spouse Abuse and the Conflict Tactics Scale. This survey was randomly administered in English, Spanish and Vietnamese to men 18 years of age and older who presented to the ED, day or night, 7 days a week. Odds Ratios (OR) with 95%CI were calculated when appropriate and a p-value of 0.05 was set for significance.

Results: The prevalence rate of male IPV was 24% in our study population (82/346). Among the men who experienced some form of abuse specified as either physical, emotional, or sexual the prevalence was calculated to be 15.6% (54/346), 13.6% (47/346) and, 2.6% (9/346), respectively. Education, income, age and race did not demonstrate an association for any one variable to be a risk factor for intimate partner abuse ($p > .05$) with the exception of increased risk of IPV among unemployed men in the relationship ($p < .04$, OR 0.592). IPV towards men was found to affect both heterosexual as well as homosexual relationships, 89% and 11% respectively. Overall, 2% (8/346) of the men surveyed had received medical treatment as a result of IPV by their intimate partner within the past year.

Conclusion: The prevalence of IPV among our study population was 24%, an astonishingly high value. In our study of 346 men, IPV crossed all socioeconomic boundaries, racial differences and educational levels for both men and women regardless of the sex of the partner. Initial research into this topic has demonstrated the need for community resources, public awareness and education of IPV in men.

A NEW CONCEPT OF ACCIDENT AND EMERGENCY CARE FOR THE UNITED KINGDOM

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Introduction: In the 1960's emergency care in the UK began evolving with the introduction of formal training of Accident and Emergency (A&E) doctors. Since then it has seen vast changes and improvements in treatment and management of patients. The Audit Commission recognised many key areas of improvement in waiting times for patients in A&E Departments both for patients to be seen by doctors or admitted. The reason for long waiting times was determined to be a shortage of doctors and poor management. Objective: To design a system of emergency care where the patients can be seen more efficiently and more quickly to meet the Government targets of under 4 hour waiting times in A&E.

Methods: The presented concept was designed after visiting many A&E Departments in the UK, Australia, USA and Saudi Arabia. Observations were made at these departments with particular attention to waiting times, patient flow through the department and quality of patient care.

Discussion: The following system was designed which appeared to work well in various hospitals of the World. Patients will arrive in three groups, group A – these patients will come by ambulance or self-referrals and will be triaged as category 1 and 2 on the Manchester Triage Scale and will be taken directly to the resuscitation area to be treated by a consultant, specialist registrar (SPR) and senior house officer (SHO). Group B will include all GP referrals to be sent to the medical and surgical assessment units to be treated by assessment consultants, SPR and SHOs. Group C will be direct referrals to A&E by GPs or self-referrals. These will again be divided into three groups – 1. chest pains directly referred to chest pains area to be treated by their staff, 2. all children directly referred to children's area to be treated by their staff, 3. all other patients to triage bays 1 and 2 manned by consultant, SPR and nurse practitioners to be triaged and treated accordingly.

EMERGENCY DEPARTMENT FACILITY DESIGN OF MAJOR TEACHING HOSPITALS IN TEHRAN CAPITAL CITY IN COMPARISON WITH INTERNATIONAL GUIDELINES

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The ability to provide high quality patient care in every emergency department (ED) is largely dependent on how well it is designed and equipped. Unfortunately, in Iran many hospitals' EDs are not designed according to the international guidelines. The purpose of this study was to evaluate the space and facility design of major EDs in Tehran capital city and comparing them with the international guidelines.

Methodology: This cross sectional analytic – descriptive study was performed on crowded EDs in Tehran city in February 2003. All teaching general hospitals in this city which had an annual patient volume of more than 40,000 were included in the study. Based on these criteria seven hospitals including: Rasoul Akram Hospital center, Haft-e-Tir Hospital center, shohadaye Tajrish Hospital center, Loghman Hospital center, Emam

Hossein Hospital center, Shariati Hospital center, Emam Khomeini Hospital center, were selected. A checklist was used to collect the data classified in six distinct group variables as follows: 1. Emergency entrance: marked entrance, ED at grade level, ambulance pathway protected from the weather, separation of the ambulatory from ambulance entrance and ambulance entrance being related to acute area directly. 2. ED physical space: treatment room, multiple-bed treatment rooms, pelvic examination room, trauma / cardiac room, orthopedic room, triage room, ED security station, 11.15 m2 treatment rooms, 7.43 m2 multiple bed treatment rooms and 23.23 m2 trauma / cardiac rooms. 3. Intra ED design: scrub station adjacent to trauma and / or orthopedic room, nurses station- preferably permitting visual observation of all traffic into the unit, nurses station, security station located in ED adjacent to the psychiatry area, with full view of the main waiting area and external and internal entrances of the reception area, triage, registration; ED imaging is contiguous to the critical care rooms and adjacent to the corner of the center core, doorways with a minimum of 1.52 m, bed treatment rooms located radially around a central core of nurses station, standard height for stand up writing desk for nurses station (40inch), treatment rooms ware separated with sliding partition and privacy of treatment rooms with drapery protector or opaque glass . 4. Minimum equipment assigned to treatment rooms including: examination light, work counter, Sphygmomanometer, thermometer, tongue blades, pen light, medication storage, cabinets, adequate electrical outlets; and cardiac / trauma rooms including: radiography illuminators, monitors and immediate access for attire used for universal precautions. 5. adjacency relationships: imaging availability, simple operation room availability, simple critical care unit availability, waiting room and reception area adjacent to outpatient unit, waiting room and reception area separated from acute area, laboratory unit, ED adjacent to pharmacy unit, ED adjacent to medical record unit, elevator for ED connection to imaging - OR - CCU, a double sized dedicated elevator, elevator adjacent to ambulance entrance and trauma / cardiac rooms and ED elevator fully separated from other hospital elevators . 6. welfare facilities: hand washing facilities provided for each four beds, patient toilet, securable closets or cabinet compartments for staff, staff toilet and hand washing facilities in treatment rooms . A positive score was given for the presence of each of aforementioned variable indicators at individual study sites. a total score was calculated for each group by simple adding of subgroup variables' scores . Mean and mode and range of the group variables for the seven hospitals were determined.

Results: The mean, mode, range of emergency entrance group variables were: 1.5, 2, 1-5, respectively. - The mean, mode, range of ED physical space group variables were: 6.5, 5-8, respectively. - The m n, mode, range of Intra ED design group variables were: 5.7, 3, 4-8, respectively. - The mean, mode, range of ED minimum equipment group variable for treatment rooms were: 6.7, 6 & 7, 6-8, respectively. - The mean, mode, range of ED minimum equipment group variables for trauma / cardiac rooms were: 1.5, 2, 1-2, respectively. - The mean, mode, range of adjacency relationships group variables were: 6.4, 3-9, respectively. - The mean, mode, range of welfare facilities group variables were: 3.5, 3, 1-5, respectively.

Conclusion: Evaluation of facility design and equipment in seven EDs of main teaching general hospitals in Tehran capital city underscored major important defects and insufficiencies. this could have caused deleterious effect on quality of patient care in these EDs. National standards should be defined to reinforce hospitals and ED managers to construct better EDs.

PRESENCE OF GENERAL PRACTITIONERS IN THE FAST TRACK OF AN EMERGENCY MEDICINE UNIT: EFFECT ON EFFECTIVENESS AND EFFICIENCY

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Objective: To analyze the effectiveness and efficiency associated with the presence of a general practitioner (GP) in the fast track (FT) of our emergency medicine unit (EMU).

Methods: The period of study was August 2002 (presence of a general practitioner and a resident) and the period of control October 2002 (presence of two residents). We substituted 16 care hours of a resident by 8 care hours of a GP. We evaluated 10 days, and collected data from 100 randomly selected patients for each period. We analyzed: total number of attended patients, number and percentage of observations and hospital income generated, age, sex, conference symptom, number and type of diagnostic tests and treatment. We used time measures as indicative of effectiveness: waiting time (Tw) to be seen by the doctor (average of the waiting time for a patient chosen at random from among the patients that were attending in each hourly interval), time duration of the visit (Tv) and total stay time in the FT (Tt). We calculated the total costs taking into account the fixed costs (wage of the FT personal) and variables costs (pharmacy and test). We defined an effectiveness index (Ef), as the quotient between the total number of attended patients and the waiting time to be visited (Tw). We defined the efficiency index (Ec) as the quotient between effectiveness and the costs generated.

Results: During the study period, a greater number of patients was attended (23.3 +/- 4.6 vs 16.1 +/- 3.5, p= 0.001) and a smaller percentage of patients had observation periods (3.2 +/- 3.1 vs 14.7 +/- 13.3, p< 0.05). There were no differences in relationship to the percentage of patients' income. The age and gender, Chalson index and conference symptoms were similar during the two periods. The Tv (76 +/- 54 vs 119 +/- 87, p< 0.0005) and the Tt (143 +/- 77 vs 204 +/- 105, p< 0005) were inferior in the period of study. The Tw was inferior in the period of study (62 +/- 32 vs 94 +/- 72), but without meaningful differences. However, it was observed a greater Ef during the period of study (0.43 +/- 0.18 vs 0.28 +/- 0.20, p= 0.04). The total costs generated in both periods were similar (17751.6 vs 17566.5 euros). The Ec, though superior in the period of study, was not significantly different (0.72 +/- 0.3 vs 0.47 +/- 0.34).

Conclusions: Presence of a GP in the FT of our EMU seems to provide a meaningful increase in the effectiveness with a similar cost, and without a deterioration of efficiency.

UPDATING EDS IN SSO HOSPITALS OF ISLAMIC REPUBLIC OF IRAN

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The Social Security Organization (SSO) of Islamic Republic of Iran has 63 hospitals and 261 clinics. It covers 26 million of the 70 million population of Iran. SSO is the second largest producer of treatment facilities in Iran after the Ministry of Health. All medical services at these institutes are free of charge for insured patients. Over the last 18 months we began

updating EDs of SSO hospitals in a set of 4 phases: Persual, Planning, Pilot, and Generalization. At present we are in the second part of the third (Pilot) Phase with very good results. This article reports the result of the plan until now.

WHY I.C.U. BEDS IN THE EMERGENCY DEPARTMENT?

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Background: Critical patients come to the Emergency Department (ED) every day and the need for attention and medical care that they require sometimes exceeds the capacity of technical and human resources available. The existence of some Intensive Care (IC) beds in the ED would help increase the quality of the first approach to this kind of patients.

Methods: We describe 289 patients, assisted and transported by the Pre Hospital Emergency Medical Team (PHEMT) to the S. Francisco Xavier Hospital in the last 18 months with Acute Respiratory Insufficiency (ARI) and Cardiac Pulmonary Arrest (CPA) to the Emergency Room (ER). We included all age groups, and excluded trauma victims.

Results: During this period, ARI was the most frequent pathology, noted in 232 patients (80%), and followed by CPA in 57 patients (20%). All of these patients needed specific pharmacological intervention and in 99 cases (34.2%) it was necessary to proceed to endotracheal intubation and assisted ventilation. Besides the previous clinical information and communication, none of these patients had direct access to an ICU bed, even if previously evaluated by the PHEMT physician they were transported to the ER. The in hospital outcomes are not known.

Conclusion: With 3 million inhabitants, Lisbon is assisted by six PHEMT. The S. Francisco Xavier Unit has assisted and transported just a small number of critical patients. None of them had direct access to an ICU bed. They stayed in the Emergency Room connected to mechanical ventilators, consuming human and technical resources needed to address the patient's critical state. The presence of ICU beds in the ED will benefit the quality of critical care attendance creating the possibility of protocols between the two departments, saving resources and intervention time.

CHALLENGES OF BUILDING A MODERN TRAUMA AND EMERGENCY CENTRE IN A DEVELOPING COUNTRY

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The University Malaya Medical Centre is a major tertiary teaching hospital. Under the 7th Malaysia Plan, resources were allocated for a modern Trauma and Emergency Centre in 1998. This centre is the first of its kind in Malaysia and is expected to be fully operational by October 2003. The all inclusive Trauma and Emergency Centre will have 10 resuscitation bays, 2 operation theatres, 20 acute medical care bays, 18 dedicated examination rooms, 20 bedded observation wards, digitalized radiography with CT Scan, isolated pediatric resuscitation and consultation rooms, isolation and decontamination rooms, support services, conference hall, training and lecture rooms with teleconferencing facilities, public exhibition halls, roof helipad, and a holistic environment. The details of the plan and the challenges experienced will be discussed and described in greater depth. The challenges include the following: 1) to create a centre of international standard incorporating the local norms, customs, and a culture of a multi racial society which is essentially Malaysia, 2) financial considerations, 3) architectural, engineering and consultant difficulties, 4) adherence to government procedures and policies, 5) purchasing of relevant and appropriate medical equipments, 6) procuring the optimum level of information and computer technology, 7) administrative challenges, and 8) development of human resource skills. This Trauma and Emergency Centre is being built in a fast developing country like Malaysia using the various models from developed countries to be in line with the medical progress of Trauma Centre Systems in the new Millennium.

Poster Presentations

CHARACTERISTICS OF CRIMINAL REPORTS IN EMERGENCY DEPARTMENT

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Background: The objective in this prospective hospital based study was to evaluate the rate and characteristics of all patients for whom prepared criminal reports were made in our emergency department. Methods: All patients, presenting to the emergency department of the Gaziantep University Hospital, Gaziantep, Turkey, between January 2002 and December 2002, were analyzed. The rate of patients with prepared criminal report, age distribution, the common causes of injury or another causes, and results of the reports (alcoholic & nonalcoholic, life threating, etc.) were investigated. Statistical analyses was performed by using 'SPSS for windows' software program. A P value < 0.05 was considered statistically significant. Results: Total of 27 622 patients visited our emergency department over this 1-year period of time, and 800 (2.8 %) of them were criminal patients. The distribution of these patients in this population was between the ages of 1 and 71. (24.08). Of all these cases 25% were female and 75 % were male. Most of the causes of the injury were blunt trauma and traffic accidents. The time which was observed in emergency department was 2-6 hours. Orthopedic, neurosurgery and cardiovascular surgery departments were the most consulted departments. Of all these patients, 22 patients were alcoholic and 58 patients were nonalcoholic. 31 patients had life threatening conditions. Conclusions:Criminal reports are very important for all emergency departments. If they aren't prepared carefully, it may be a serious judicial problem for doctors, the emergency department, and the hospital director.

PATIENTS DIAGNOSED WITH PRIMARY CANCER IN THE EMERGENCY DEPARTMENT

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Background: The objective in this prospective hospital based study was to evaluate the rate and characteristics of all patients who were first diagnosed with malignancies in our emergency department. Methods: All cases of these patients, presenting to the emergency department of the Gaziantep University Hospital, Gaziantep, Turkey, between January 2002 and December 2002, were analyzed. The rate of patients with first diagnosed malignancies were investigated. Results: Total of 27 622 patients visited our emergency department over this 1-year period of time, and 21 (0,07%) of them had first diagnosed malignancies. The distribution of these patients in this population was between the ages of 16 and 74 (48). Of all these cases 57% were female and 43% were male. The most frequent primary tumors were lung carcinoma (7 patients) and colon cancer (4 patients). The most common complaints were abdominal pain and shortness of breath. The most common laboratory studies were computed tomography and endoscopy. Conclusions: Prevention and early diagnosis are considered the main tools to reduce the incidence and mortality from cancer. After an emergent event, diagnosis of cancer may be detected in the emergency department. In this situation, patients should be carefully screened for malignancies.

FOREIGN BODY IN URETHRA: CASE REPORT AND LITERATURE REVIEW

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A 28-year-old man applied to Emergency Department (ED) complaining of pain in the penis. The physical examination revealed a pencil in the patient's penis. We learned that he had inserted the pen in his urethra for masturbation. The spring and the rubber part containing ink was out. On the contrary, they pushed the pen point towards the urinary bladder. In his physical examination a solid body palpated in the penis. In his plain radiography there was a radiopaque image of approximately 2 cm. This image fitted the metal part of the pen point. This foreign body couldn't be removed in the ED. After urology consultation the pen was retrieved in the operating room under general anesthesia. Meatotomy was performed. The patient was examined by the psychiatrist and diagnosed with mental retardation. He was discharged with follow up by psychiatry and urology. Discussion: There are case reports of patients presenting with retained urethral and vesical foreign bodies placed for erotic gratification in the literature. Foreign bodies can be retained anywhere along the lower urinary tract from the anterior urethra to the bladder. Potential acute complications include urinary obstruction and local trauma. Self-insertion of foreign bodies into the urethra has been reported in the urology literature. It also appears in the psychiatric literature, too. As a matter of fact, these kinds of patients are rarely seen in ED. We could not find any controlled studies on diagnosis or treatment. The critical question is; what is indication for emergent urology consultation in the ED? Following questions need to be answered in order to call for the urologist: 1) Is foreign body causing urinary retention? 2) Is urethral catheter not passing through urethral tract? 3) Is there any suspected actual or impending bladder perforation? 4) Is there any active genitourinary bleeding? 5) Are there associated another injuries related with genitourinary injury?

FACTORS ASSOCIATED WITH PATIENTS WHO LEAVE WITHOUT BEING SEEN

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Background: Patients who leave without being seen (LWBS) by an attending physician can be an indicator of patient satisfaction and quality for emergency departments. Objective: To develop a model to determine factors associated with patients who LWBS. Methods: A case-crossover design to determine the transient effects on the risk of acute events was utilized. Over a four-month period, time intervals when patients LWBS were matched (within two weeks) according to time of day and day of week with time periods when patients did not LWBS. Factors considered were percentage of ED bed capacity (patients/available treatment beds), acuity of ED patients, LOS of discharged patients in the ED, patients awaiting an inpatient bed in the ED, inpatient floor capacity, ICU capacity,

and the characteristics of the attending physician in charge including age, experience, full or part-time status, board certification, and the completion of an EM residency. McNemar's test, Wilcoxon Signed Rank test, and conditional logistic regression analysis were used to determine significant variables. Results: Over the study period there were 11,652 visits of which 213 (1.8%) resulted in patients who LWBS. Measure of inpatient capacity were not associated with patients who LWBS and ED capacity was only associated when greater than 100%. This association increased with increasing capacity. Other significant factors were older age ($p<0.01$) and completion of an EM residency ($p<0.01$) of the physician in charge. When factors were considered in a multivariate model, ED capacity greater than 140% OR=1.96 (95%CI 1.22-3.17) and non-completion of an EM residency OR=1.85 (95%CI 1.17-2.93) were most important. Conclusion: ED capacity greater than 100% is associated with patients who LWBS and is most significant at 140% capacity. ED capacity of 100% may not be a sensitive measure for overcrowding. Physician factors, especially EM training, also appear to be important when using LWBS as a quality indicator.

EFFECT OF A SESSION OF EDUCATION ON TRIAGE UNDERTAKEN BY PARAMEDICS IN THE EMERGENCY DEPARTMENT

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Objective: To determine the extent of the impact of a session of education on the efficacy and accuracy of the triage applications conducted by paramedics in the Emergency Department (ED). Materials and Methods: The study is planned as a three-stage intervention study (i.e. pre-education, education and post-education phases). The study enrolled all adult patients referred to the university ED within the randomly assigned time periods in the one-week pre-education and post-education phases. Among these two phases, all the paramedics (n 8) staffed in the ED underwent a two-hour education session run by EMS professionals. Triage decisions recorded by paramedics were compared with those given by emergency physicians (EP). These pre-education figures were also compared with post-education results. Consistency was evaluated with kappa statistics. The comparisons were performed via ANOVA, t-test and chi-square. Results: Triage decisions of paramedic and EP in the pre-education phase showed poor consistency (kappa=0.317, kappa=0.388) The corresponding value in the post-education phase was still found to be low, even though slightly increased. On the other hand, the consistency between the triage assessments recorded by paramedics and EPs regarding the general appearance of the patients increased from low in the pre-education phase to moderate in the post-education phase (kappa=0.327, kappa=0.500 respectively). The mean waiting period in the triage area in the pre-education phase was 2.3 10.3. It declined to 1.3 10.2 in the post-education phase ($p=0.015$). Conclusion: The education session was associated with a slight increase in the consistency of triage decisions recorded by paramedics and EPs, although it was still low.

MASSIVE INTRACRANIAL HEMORRHAGE AFTER INGESTION OF DIMETHYL SULFOXIDE (DMSO)

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Introduction: Dimethyl sulfoxide (DMSO) has been widely used in treatment of arthritis and certain inflammatory diseases. It was also considered as an alternative remedy for cancer even if not supported by concrete evidence. This report illustrates the first case suffering a fatal complication (i.e., intracranial hemorrhage) following the illicit use of the agent against cancer with unknown amounts. Case report: A man who had reportedly ingested one tablet of 500 mg acetaminophen and about half a teaspoon (~1 ml) of DMSO solution by mouth was brought to the emergency department (ED) after experiencing two tonic-clonic seizures. He had malign mesothelioma of lung with brain metastases which caused no neurologic deficit. The dose the patient had ingested was the first dose within three months. On presentation, examination revealed right-sided hemiplegia. Unenhanced computed tomography of the head revealed three hemorrhagic areas that had blood-cerebrospinal fluid levels on left parietal, occipital and frontal regions accompanied by midline shift. The international normalized ratio was too high to measure, the partial thromboplastine time was more than 60 seconds and prothrombin time was 95.8 seconds. After initial resuscitation, two units of fresh frozen plasma were administered. Antiedema treatment was instituted with mannitol and dexamethasone. Epistaxis and macroscopic hematuria ensued six hours after ED presentation. A green stool discharge with the same rotten egg odor was noted. Anisochoria was noted after 11 hours followed by cardiac arrest which did not respond to resuscitative measures. Conclusion: DMSO is not recommended for cancer treatment. It can cause massive intrametastatic hemorrhage and neurologic deterioration can be profound in patients with metastatic brain lesions.

DATA DRIVEN TOTAL QUALITY MANAGEMENT IN THE EMERGENCY DEPARTMENT AT A LEVEL I TRAUMA AND TERTIARY CARE HOSPITAL

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Background: While many community hospitals have embraced the concept of Total Quality Management (TQM), teaching and tertiary care hospitals have been slower to implement these programs. We describe how a TQM program was designed and implemented in the emergency department (ED) of a tertiary care environment and demonstrate improvement in markers of patient care. Objective: To improve the efficiency and quality of the care as demonstrated by specific TQM markers in a tertiary care facility. Methods: A TQM program was designed and implemented in our ED in 1998. This program involved monthly data collection and analysis, and staff education in the core concepts of patient satisfaction. Components of the program included census data, physician profiling, and focused clinical audits. Baseline indices collected at the beginning of the program and at the four year

mark included: (1) patient complaint rates, (2) turnaround times (TAT), (3) rates of left against medical advice (AMA) and left without being seen (LWOBS), and (4) patient satisfaction surveys performed by an outside consulting firm contracted by hospital administration. Results: During the four years since its implementation the program demonstrated improvement in all measured areas. Despite an increase in patient volume of 32% to 37,000 visits/year, and only minimal staffing adjustments, the rate of complaints dropped by 56.1% (2.1 per 1,000 patients to 0.92), the TAT decreased from 183 minutes to 161 minutes (12%), and patients leaving AMA and LWOBS decreased 64.0% from 2.5% to 0.9%. Similarly, 44.8% of ED patients rated their care as "excellent"(compared to the national benchmark level of 30% for teaching institutions). The program led to a number of focused initiatives that resulted in specific improvements in an array of clinical problems including endotracheal intubation, pain management, and laceration care. Conclusion: Heretofore tertiary care centers have not been thought to be environments conducive to strong TQM programs nor to a culture committed to patient satisfaction. We demonstrate how such a program was designed, tracked, and how that process demonstrated improvement in specific TQM parameters.

EMERGENCY PHYSICIANS DO IT BETTER!? THE SOUTH AFRICAN RED CROSS AIR MERCY SERVICE IN THE NEW MILLENNIUM

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Objective: Primary respond to trauma in South Africa has a number of unique challenges. South Africa is a large rural country with an uneven distribution of services; a restrictive infrastructure; severe financial restraints; and an overwhelming incidence of substance abuse, violence and severe motor vehicle accidents. Method: The attempts made by the South African Red Cross and its Air Mercy Service in the past and future plans arepresented, the role of dedicated emergency medicine manpower and infrastructure are described and an overview of the current literature is given. Results: The delivery of an efficient yet cost effective Aero-Medical Service using for example the Swiss single engine Pilatus PC 12 aircraft as a flying ICU, and our helicopter fleet in combination with dedicated EM trained staff and ICU personnel are in the forefront in attempting some of these challenges. It is hoped that the results of this study will firmly entrench the role of Aero-Medicine in the South African Emergency Medical Care environment.

PATIENTS LEAVING EMERGENCY DEPARTMENT AGAINST MEDICAL ADVICE (AMA)

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One of every 65 patients visiting EDs, leave against medical advice. They increase the rate of malpractice though there may not be any legal or ethical problem. Leaving AMA is either Patient related, medical service providers or hospital environment related. Being informed of causes of leaving AMA in every ED helps to improve medical services, specially in Rasool Akram hospital ED, which is the first experience of modern EDs in Iran. Methods & materials: This is a retrospective cross-sectional study. 110 patients were selected by a clustering sampling. Demographic information collected from medical units. The cause of leaving AMA was asked from patients in a telephone interview. Spss 11.0, chi^2 & t-test were used for data analysis. Results: Mean age was 27.9 (24.3-31.5) years. 61.8% were male & the rest were females. The most prevalent chief complaint was orthopedic complains (44.1%), Multiple trauma (15.3%) & abdominal pain (10.8%) placed next. 45.4% of patients mentioned "feeling better" & "finding no necessity for anything more"as the cause of leaving AMA. Personal business (23.5%) & delay in providing medical services (16.8%) placed next. There is a significant difference in causes of leaving AMA according to the service in charge (0.0001) & chief complaint (0.001). Discussion: Young men were the most patients leaving AMA. feeling better" & Personal business as the first two leading cause of Leaving AMA, goes with other studies. Special principles in orthopedics, surgery & gynecology services in Rasool Akram hospital, could be considered as the underling cause of leaving AMA. Key words: leaving against medical advice _ emergency department _ medical services.

FREQUENT USERS IN HOSPITAL EMERGENCY DEPARTMENT

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The use of the hospital emergency departments has increased. A small group of patients, frequent users (FU), accounts for a significant proportion of the visits. Objectives: Epidemiological description of frequent users (FU) in our area. Methods: A cross-sectional and retrospective study. The subjects were all patients evaluated in a period of 2 years. A database was performed dividing the patients in two groups: FU (>6 visits/24 months) and non-frequent users (nFU). The information reviewed included: age, gender, number of patients, number of visits, number of hospital admissions and services responsible for the diagnosis. Results: 148.939 patients were evaluated, 7.64% were frequent users that accounted for 1.64% (1.563) of the total number of visits. The mean of diary visits was 220±20: 14.7±4.3 for FU and 184.2±19.4 for nFU. Men accounted for 52.23% of the patients (49.5% in the FU group). The distribution in different age groups was: 31.43% <15, 33.58% 16-40, 16.99% 41-65, 14.56% 66-80 and 3.2 >80 years. Patients with <2 years accounted for 55.9% of the total pediatric visits. The percentage of FU that required hospital admission was 12.68% versus 15.9% of nFU. The hospital departments responsible for the diagnosis were internal medicine (42.29%) and pediatrics (26.46%). Conclusions: FU represents a small group of the total demand in the emergency department. The characteristics of FU depend on age and sex. The more representative groups were boys and woman in the fertile age.

ARE THE EMERGENCY DEPARTMENTS LOCATED IN IZMIR APPROPRIATE ACCORDING TO INTERNATIONAL GUIDELINES?

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Study objective: Rapid development of Emergency Medicine (establishment of emergency residency programs and a successful pre-hospital care) is one of the latest issues in the Turkish health system. The purpose of this study was to determine the appropriateness of architectural designs of Emergency Departments (ED s) located here in Izmir Turkey according to the guidelines proposed by different associations such as American College of Emergency Physicians and Society of Academic Emergency Medicine. Methods: After preparing the standard checklists we conducted the trial by interviewing the medical chief of the emergency departments. The checklist of our study had the basic following parameters: The visibility, flexibility and the simplicity of ED, the diagnostic and the therapeutic capacities; the size of the ED; location of the ED in the hospital, entrance of the ED; patient exam rooms and all other details that must be available. Results: After finishing the survey, we perceived that the best-designed two hospitals were both university hospitals followed by two social security and then the rest two state hospitals respectively. Conclusion: Here in Turkey, there is a serious development about the organization of The Emergency Medical System followed by the organization of the emergency departments. The university hospitals were much better designed than the others. We believed that this obvious difference might be due to presence of emergency residency program in on of the university hospitals.

QUALITY INDICATORS IN PRIMARY CARE EMERGENCY ROOMS, A COMPARATIVE ANALYSIS

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A quality indicator is a quantative measure that can be used as an assessment guide of an activity and , therefore, it simplifies inspections, follow-ups and evaluates the quality of a particular activity. It is , therefore, an instrument that allows comparisons among different services of Emergency Room of Primary Care Center (Servicio Urgencias Atención Primaria S.U.A.P). Objectives: To analyse quality indicators: time to first medical contact and time of the attention in S.U.A.P (process indicators) in three different (SUAP) of the autonomous region of Cantabria. Methodology: The sample is formed by 100 first evaluated patients of each S.U.A.P, those that seeked urgent medical attention during October 2002 in the S.U.A.P. of: Santoña , Astillero and Camargo. Medical attention at people´s home has not been included in the study. Once the patients are selected the time to first medical care is measured, which measures the time that lapses from the time of arrival to S.U.A.P. until the patient is treated for the first time by a doctor, and the time of medical care which measures the time that passes from the moment the patient is attended until discharged. Both measures have been put forward by the Spanish Society of Casualty Medicine and Emergencies (SEMES) as quality indicators in the Emergency Departments. Results are presented using percentiles 75% and 95 %.

Results:

Emergency Room of Primary Care Center (S.U.A.P)	Time to first medical care		Time of medical care	
	Pc 75%	Pc 95%	Pc 75%	Pc 95%
Santoña	14 min.	33 min.	17 min.	30 min.
Astillero	15 min.	30 min.	15 min.	45 min.
Camargo	10 min.	16 min.	25 min.	40 min.

Conclusions: The different time of medical attention can be due to the heteregoneity of the process or night duty doctor's clinical variability. As for the time of first medical attention the smallest delay observed in the SUAP of Camargo can be due to patient flow or to simultaneous attention. Subsequent studies are required that relate time with processes and protocols of medical attention in the SUAP.

ADVANTAGES OF AN OBSERVATION UNIT IN AN EMERGENCY DEPARTMENT (ED)

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Objectives: Assessment of the activity of the Observation Unit (O.U) of an E.D. Methods: A prospevtive study during one year in an E.D of a teaching general hospital with a 6 beds O.U. Results: 36545 patients are seen at the E.D (100 daily) of whom 8770 (24%) patients are admitted at the O.U: 78% are medical, 19% are post-traumatic injuries and 3% are non traumatic surgical patients. Three causes for admission are identified: - Care for more than 3 hours and checking out from the E.D before 48 hours: 3024 patients (34,5%). - Admission at the O.U before transfer to other departments because difficulty to hospitalize or for precise diagnosis: 1923 patients (21,9%). - Testing and further treatment and checking-out before 3 hours : 3823 patients (43,6%). Discussion: The O.U works through all the day with the same staff so it provides a constant care during all the time and permits a faster testing and treatment than other departments. It avoids some hospitalization and may be a financial saving way. It permits to wait place in the other departments but we have to reduce the length of stay in the O.U. Conclusion: We recommend the setting-up of an O.U at the emergency departments but the length of stay must be less than 48 hours in all cases.

CAUSES OF PROLONGED LENGTH-OF-STAY IN AN OVERCROWDED EMERGENCY DEPARTMENT OF A TEACHING HOSPITAL IN TEHRAN CAPITAL CITY

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Ideally, patients' length-of-stay in Emergency Department

(ED) should not exceed 6 hours. Prolonged length-of-stay has deleterious effects on ED overcrowding, quality of patient care and patient satisfaction. To evaluate the causes of this problem the current study was conducted in a typical overcrowded ED of a general teaching hospital in Tehran City. Methodology: In this cross-sectional and prospective study, charts from patients held longer than 24 hours, in Hazrat Rasool hospital of the Iran University, were reviewed from October 23, 2002 through November 23, 2002. Results: Of 3,630 patients, 222 (6.1%) had been held in the ED for more than 24 hours (7.4 patients per day). In 89 (40%) of them, admission was indicated but delayed (21 because more than one specialty were involved, 68 because of limitation of unoccupied beds). Eighty-five (38%) patients did not meet admission criteria (33 because they didn't have a specific diagnosis and 52 because of the completion of their treatment course in the ED). Thirty-one (14%) left the ED against the medical advice. Seventeen (8%) were refused to admit because they were moribund and medically hopeless. Conclusion: Lengthy stay of patients in ED of teaching hospitals is a major problem. The most frequent causes are limitation of inpatient beds, lack of a clear guideline to admit multi-specialty and moribund patient and those with uncertain diagnosis. The following solutions are proposed (1) Creation of a holding unit (2) Delivery of more authority to Emergency Physicians (3) Pre-established rules for admitting controversial patients (4) Active inter-facility transfer.

THE IMPACT OF DOCTORS' STRIKE ON EMERGENCY CARE IN THE EMERGENCY DEPARTMENT

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Objective: To evaluate the quality of emergency care in the emergency care center of a university based teaching hospital in Daejeon, Korea, during a doctors' strike. Methods: From June 20 to 26, 2000, all residents participated in a strike to protest reformation of the drug delivery system and the medical insurance system. During the strike, all emergency care was provided by board certified emergency physicians. We reviewed the emergency department medical records in our department (yearly census 26,000) and compared patient demographics, visit characteristics, diagnostic testing, treatment, disposition, and ED length of stay during the strike period (SP) with those during a non-strike period (NSP) of June 20 - 26, 1999. Results: The two groups (NSP: 606 versus SP: 573 patients) showed significant differences in the proportion of non-emergent patients (408 versus 474; 95% confidence interval [CI] 1.44 to 3.74), the number of the visiting patients below 19 years old (20.8% versus 35.6%; 95% CI 1.34 to 3.31), the average number of diagnostic tests per patient (3.45 versus 1.14; 95% CI 1.88 to 2.74), the average length of stay per patient (7.01 versus 1.99 hours; 95% CI 3.01 to 7.02), and the admission rate (20.6% versus 7.0%; 95% CI 10.9 to 16.5) in non-emergent patients. Conclusions: In this study, the proportion of non-emergent patients, children, and patients below 19 years of age, increased during the strike. Emergency care was more efficient, especially for non-emergent patients, when care was provided by board certified emergency physicians without residents.

PROGRESS REPORT: EMERGENCY MEDICINE IN SOUTHERN ISRAEL

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The development of Emergency Medicine (EM) in Israel represents a paradox. There are few places on Earth where doctors are more attuned to or more experienced in managing the sudden, the unexpected and the terrifying. Israelis are highly skilled in preparing for and managing mass casualty events, and disaster medicine is prominent and highly developed. Yet the specialty of EM is in its infancy. EM was recognized as a specialty in 1999, after a long struggle by the Israel Association of Emergency Medicine (IAEM). Nationally there are three active EM residencies, producing 12 graduates per year. Physicians can undergo EM residency training only after completing training in another specialty. This paper focuses upon EM at Soroka Medical Center in the Negev, where the residency program produces 3 graduates per year. Soroka is a busy hospital, serving as the tertiary referral center to a diverse population of one million people, and to 60% of Israel's land mass, and receiving nearly 200,000 ED visits per year. The developments at Soroka highlight some unique aspects of medicine in Israel well as the challenges in developing EM. Finally, there is ample room for doctors and medical organizations from the United States and other parts of the world to learn from Israel, yet also to bring their own training, experience and resources to foster the growth of EM.

WORKFORCE PROJECTIONS FOR EMERGENCY MEDICINE IN PUERTO RICO. A FIVE YEAR FOLLOW-UP OF AN EVIDENT DEMAND

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Objectives: To calculate and establish the actual emergency medicine workforce need and project when it will meet the actual demand. Methods: Using available data, mathematical equations were analyzed to determine the need for Emergency Medicine Physicians (EMP) in Puerto Rico (PR). The equations used are: 1. supply equals the number of existing EMPs plus residency trained graduates in EM per year minus the annual attrition rate; and 2. demand equals 6 full time equivalent positions per Emergency Department (ED) times the total number of EDs in PR. This equation considered one medical director per ED, but did not consider the effects of teaching, research responsibilities or ED fluctuations in census. The author assumed that EM residency graduates would fill available clinical positions. Discussion: From our previous study, we concluded that there was a significant shortage in the PR EMP workforce. The actual calculated shortage is 279 EMPs. Supply will meet demands in year 2042 if all variables remain constant. We assumed a constant 3% attrition rate, and no new ED opening and no closure of any existing ED, for a total of 56. Also, the number of graduates who moved to the USA remained constant at 30%. Results: Under both scenarios tested, the significant EMP shortage in PR will continue under studied circumstances, until 2042. During the past 5 years, we had 29 new EMP added to the PR workforce (27 residency graduates and 2 from USA). The attrition rate remained constant and the number of graduates who left to United States

mainland for a fellowship or to practice emergency medicine was 12.

CORRELATION OF STRESS HORMONES AND LEVELS OF ANXIETY IN INTERN DOCTORS WHO START EMERGENCY DEPARTMENT

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Objective: The aim of this study was to evaluate the metabolic and emotional responses of intern doctors to stress in the ED (Emergency Department). We also studied the relationship between the metabolic response and the emotional state of people included in the study. Methods: 37 intern doctors who came to the ED for training were enrolled in this study. Two groups were studied. The study group (SG) consisted of 22 interns, and the control group (CG) consisted of 15 people. Anxiety scores of the groups and blood levels of some stress hormones and blood glucose levels were analyzed. Results: Anxiety score and blood levels (e.g. glucose and cortisol) of SG were found higher than CG. Insulin levels of the SG were found lower than CG ($p<0.05$). Prolactin levels of the SG were found higher than CG which was not statistically significant ($p>0.05$). Positive correlations were found between the anxiety scores and cortisol levels ($r=0.430$ $p<0.01$), and negative correlation was found between the anxiety scores and insulin levels ($r=-0.402$ $p<0.05$). Conclusions: This study proves that intern doctors working in the ED experience anxiety, and exhibit some metabolic responses. In addition, there is a good correlation between anxiety scores and the metabolic responses.

INCIDENCE OF TRAUMA AFTER THE SEPTEMBER ELEVENTH TERRORIST ATTACKS

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Objectives: This study was undertaken to determine if there was a change in the incidence of trauma presenting to major trauma centers for the seven-day period following September 11, 2001. Methods: Data from the seven-day period following September 11 (week four) was compared to the same seven-day period the week prior (week three), as well as the two corresponding seven-day periods in 2000 (weeks one and two). A retrospective analysis was performed on data from the Illinois Department of Public Health trauma registry. The registry includes data from all the Level I and II trauma centers in the state of Illinois. Data were analyzed for intentionality using etiology codes. Results: A total of 3,474 cases were analyzed. There was no significant difference in amount of trauma patients between weeks one and two, and an increase in week three of 9% compared to the first two weeks ($p=0.002$). In week four, the week following September 11, there was an 11% decrease from the first two weeks ($p=0.003$) and a 16% drop from week three ($p=0.001$). There was no significant difference in intentional trauma between the four weeks, and the difference in unintentional trauma mirrored the overall statistics. In Chicago, there was a decline of 18% compared to the first three weeks ($p=0.011$). The average daily temperature and average daily precipitation from these time periods are also provided. Conclusion: This data shows that there was a dramatic decrease in the incidence of overall trauma after the disastrous events of September 11, 2001, with most of the decrease occurring in the unintentional category. This suggests the average population was putting themselves at less risk than before. Surprisingly, the incidence of intentional trauma did not significantly decrease. This decline in overall trauma may have an impact in resource utilization in areas distant from any future catastrophic event.

EMERGENCY DEPARTMENTS PROVINCE COORDINATION COMMISSION IN IZMIR TURKEY

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Ýzmýr Acýl Servýsler Arasi Koordýnasyon Komýsyonu Ýzmýr

It is the goal for all the Emergency Departments (ED's) in Ýzmir/Turkey to function at a similarly, high level of international standards. Top-quality services that will enhance the ability to attain this goal include forming a transport chain between the hospitals and emergency services, and maintaining a well-trained, and motivated staff. To achieve these goals, 'Emergency Departments Province Coordination Commission (EDPCC) 'was organized in Ýzmir, Turkey on 22, November 2002. The commission gathers at a meeting every month in a different ED. The functions of the commission are to: 1. Coordinate EDs nationwide, 2. Determine the patient transport criteria among the hospitals' ED, working to establish the chain, 3. Support the operations between the EDs to strengthen the communication background, 4. Determine the standardization of the concepts of personnel, equipment, physical conditions and working principals in respect of the capacity of the EDs, 5. Plan the training of the working personnel, 6. Make proposals on personnel working order and medical procedures, 7. Participate in the development and coordination between 112 Emergency Call Center and Hospitals' EDs, 8. Plan the training of EDs to prepare them for disasters and also to determine the hospital disaster projects, 9. Supply the evaluation of statistical data and provide the results of the analysis, and 10. Make proposals to higher positions to increase the quality and the quantity of EDs.

EVALUATION OF ROMANIAN HOSPITALS AS POTENTIAL TRAUMA CENTERS

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Background: Trauma in Romania is a growing problem. Not only the number of cases but also the diversity and level of seriousness is increasing. Objectives: To evaluate regional and county hospitals and other smaller hospitals as potential trauma centers and to classify them in different levels based on their human resources, equipment and organization. Methods: A questionnaire was designed to collect information on personnel, equipment and organization of shifts. We used an adapted U.S. classification system in order to classify the hospitals that answered the questionnaire into level I, II, III or IV trauma centers. A number of hospitals answered the questionnaire by mail while most of them answered on a direct

phone interview by one of our staff. Results: Over 80 hospitals answered our questionnaire, the majority of the county and regional hospitals are included in the evaluation. We also included a number of smaller town hospitals. Only two hospitals, one in Bucharest and the other being a regional hospital in the north could qualify as level I trauma centers, eight county and regional hospitals could qualify as level II trauma centers while the rest qualified as level III and level IV trauma centers. One of the major issues was the fact that certain university hospitals, considered the highest levels of hospitals in Romania, only qualified as level III or even IV trauma centers mainly because of organizational problems, as well as because of lack of certain equipment and specialties necessary for level I or II trauma centers. Conclusions: The number of hospitals that could qualify as level I trauma centers in a country with 24,000,000 inhabitants, and long distances as in Romania, is very low. The trauma management system should be revised and improved in order to have at least several regional level I trauma centers. Most county hospitals should be no less than a level II trauma center in the future based on the areas and population they serve.

EVALUATION OF SHOCK-TRAUMA UNIT OF 2 DE MAYO HOSPITAL LEVEL IV IN LIMA PERU 2002

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During the year 2002 we had 3,639 patients per month that presented to the emergency room, and 67.41% of cases went to the shock trauma unit (809 patients). 437 cases were 18-60 y.o. (54%), 328 patients were more than 60 y.o. (40.6%), and 44 patients were less than 18y.o. (5.4%). 42% were women and 58 were men. The 5 most common diagnoses at the shock trauma unit were: trauma: 21. 8% (156), shock: 18.9% (121), D.C.V: 11.9% (85), IRA: 10.5% (75), SICA: 9.2% (66), of 509 patients. The disposition of the patients treated at the shock trauma unit were: UCI: 25.9%, O.R.: 12.5%, observation unit: 56.6%, transfer to other hospital: 5.03%. The mortality of the shock trauma unit of 2 de mayo hospital in 2002 was 15.57%, and the most common cause of death was sepsis. The shock trauma unit of 2 de Mayo Hospital follows level IV hospital criteria of Peru and of other developing countries as well.

EPIDEMIOLOGY AND CLINIC OF SEPSIS IN THE EMERGENCY SERVICE OF CENTRAL POLICEMEN HOSPITAL OF PERU-2000

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The objective of this retrospective work is to evaluate the clinical and epidemilogic feautures of sepsis at the emergency service of Central Policemen Hospital of Peru-year 2000. Sepsis was 5% of total clinical presentatios of emergency service inthis hospital.The age ranged was 60 (range plus o minus 20 y.o).the epidemilogy background was:pulmonary diseases,Acv, hypertension,diabetes mellitus, hepatic cirrhosis,inmunosupression,and invasive procedures... The infectious focus were: respiratory, abdominal, urinary, dermic, and others.The bad evolution of sepsis to severe sepsis,septic shock and refractary septic shock and or multipèle dysfunction organ,increases the mortality in the emergency service of central policemen hospital of lima-peru. Concluded that the rapid diagnosis of sepsis decreses the morbi-mortality of it.

UNCOMPENSATED METABOLIC ACIDOSIS IN AN EMERGENCY DEPARTMENT; AETIOLOGIES AND PROGNOSIS

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Objective: To describe the aetiologies and the prognosis of uncompensated metabolic acidosis (UMA) admitted in an ED over a two years period. Methods: Reviewing charts, all UMA (defined as measured pH<7.35 and alkaline reserve (AR) <23 mmol/l) were isolated. Following data were collected: age, gender, vital signs, anion gap (AG, defined as AG = [Na+]-([Cl-]+[HCO3-]), normal<15 mEq/l), disxposition (ICU or conventional unit (CU)), aetiology of the UMA and evolution (survival or decease). Results are given in mean (percent) and 95% confident interval (95%CI). Results: During the period, 85876 patients were admitted, 3735 arterial blood gas were realised, and 141 UMA were identified (130 charts analysed). Mean age was 64 years (95% CI 60 to 68 years), 60% were females (95%CI 52 to 68%). Mean pH was 7.24 (95%CI 7.22 to 7.26) and mean AR was 14.8 mmol/l (95%CI 13.9 to 15.7 mmol/l). AG was normal in only four cases. In the elevated AG group (126 patients), aetiologies were: 81 lactic acidosis (73 shocks, 5 status epilepticus, 3 intoxication), 1 salicylates' intoxication, 26 ketoacidosis (19 diabetic, 7 alcoholic), 18 uraemia. Fifty-four patients were admitted in ICU, the others in CU. Age, gender, vital signs and ABG were not different between both groups. A total of 38 patients deceased (29% of all the UMA), mostly in the three days following their admission. All the deceased patients originated from the lactic acidosis group (47% of the group). For each case, an effective etiologic therapy was unavailable. Gender, vital signs and ABG were not different between both groups, whereas age was (76 (deceased) versus 58 years (survival), difference 18 years, 95%CI 10 to 25 years). Conclusion: Uncompensated metabolic acidosis is rare but serious (29% of decease). Prognosis is not dependant of the pH or alkaline reserve levels at admission. It mostly depends on the possibility of an early etiologic therapy.

USE OF CHEST XRAYS BY EMERGENCY DEPARTMENTS. DO THEY CHANGE OUR MANAGEMENT?

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Objectives-This was study designed to demonstrate if chest xrays in a district general hospital emergency department changed the clinical outcome for the patient. We aimed to highlight areas of inappropriate use hence make financial savings and reduce radiation exposure.

Methods- This was a retrospective chart review of 62 consecuative chest xray exposures from emergency patients in the department both admitted and discharged patients. The main aim was to determine in which areas we could reduce xray exposure by identifying if xrays were being requested when this would not alter management plan.The frequency that temperature, pulse, respiratory rate and oxygen saturation parameters were recorded and those subsequently abnormal. We reviewed the indication for the xray, information about previous chest xrays and record of the observed result. Results- Only

50% of the xrays provided information that would potentially change the patient's management although 68% had positive findings recorded. 29% were requested for investigation of chest pain (pleuritic in 8.1%), 11.3% for investigation of abdominal pain, 5% for TIA's. Conclusions- Approximately 50% of chest xrays requested from the emergency department are inappropriate. They are often requested unnecessarily for chest pain, transient ischaemic attacks, mild chest infections, head injury, haematemesis and minor injuries. References:

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DO WE REALLY NEED AN XRAY? ARE WE BEING OVER CAUTIOUS?

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Objective: The objectives of the study were to identify areas in which clinicians tend to be very cautious in their use of diagnostic plain xray use in the emergency department. Request of inappropriate plain xray investigations has resource, radiation and overcrowding implications for the emergency department. Methods: This was a prospective study for 7 days from 1st –7th April 2002. A prospective proforma was completed by the attending doctor or nurse practitioner for all patients attending the emergency department requiring xray. Questions included type of xray, predicted result of xray (normal/abnormal) and observed result of xray. Results: 226(81%) out of a total of 280 xrays were accurately predicted, 94(34%). xrays were abnormal. Facial bones (100%) and skull (79%) were most commonly xrayed when the result was predicted accurately to be normal. Threshold for xraying abdomen, KUB and lumbar spine was low with normal accurate predictions of 67%, 75% and 75% respectively. Normal knee and foot xrays were predicted accurately in 61% and 60% of cases respectively with an abnormal yield of 28% and 13% respectively. Conclusion: Training of emergency medicine staff should include education about clinical indications from guidelines and recommendations about xray use, information on dose of radiation exposure, implications of resources and overcrowding of departments.

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THROMBOTIC THROMBOCYTOPENIC PURPURA (TTP)

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Attempt to Identify TTP in the Emergency Room. Because TTP is a rare disease, it is not being diagnosed correctly through the routine examinations that are conducted in the ER. In the case of TTP, early detection of the disease and appropriate and immediate treatment (plasmapheresis), results in a significant improvement in the prognosis. Hence, we should be diligent and take TTP into account as part of our regular routine. Following is a brief description of two cases. 1. A fifty-year-old man of Arab extraction was brought to the ER because of confusion and fainting. On the previous day he felt weakness in the left part of his body. The weakness disappeared after a while. In the ER the patient was confused and started to convulse. A purpura was observed. Additional tests included anemia, thrombocytophenia, cell fragments on peripheral smear, increase in BUN count and elevated bilirubin and LDH. 2. A fifty-three-year-old man was brought to the ER because of loss of consciousness and fever. In the ER they noticed a purpura on the right arm. Additional tests were done for anemia, thrombocytophenia and kidney injury, and elevated bilirubin count, LDH, and cell fragments on peripheral smear. The patient was treated with plasmapheresis with doses of FFP and was released. We have described two cases of men of approximately the same age who fit the clinical definition of TTP. We conducted lab tests to diagnose the disease and the tests were positive. Because the necessary treatment was unavailable in our hospital, one of the patients was transferred to Hadassah University Hospital, Ein Kerem, within several hours. Because the treatment was delayed the patient died. The second patient, after being diagnosed and undergoing a lengthy plasmapheresis treatment with doses of FFP, experienced improvement in his condition and was released.

BLOOD KETONE AND LEPTIN LEVELS IN DIABETIC PATIENTS WITH SUSPECTED METABOLIC DISORDER IN THE EMERGENCY DEPARTMENT

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Background and aim: The relationship between plasma leptin levels and ketonemia was controversial. The aim of the study was to evaluate the relationship between plasma leptin and ketone levels in diabetic patients in emergency setting. Patients and Methods: Total 139 diabetic patients (mean age: 58 +/- 13 years) presenting to our tertiary care university emergency department with any medical complaint, a high glucose level (=200 mg/dl) associated with any blood level of beta-hydroxibutiric acid (ß-HBA) were included. Arterial gas analysis, urine ketone dip test, point of care testing ß-HBA levels and leptin levels were measured in all patients. Results: Total 48 of 139 patients was hyperketonemic (ß-HBA =0.42 mmol/L) and 18 of these 48 patients were diabetic ketoacidosis. Total 63 patients were hospitalized and 9 patients died. Body mass index and age were similar in all groups (p>0.05). Plasma leptin (p=0.03) and ß-HBA level (p=0.00) were statistically significant different be-

tween the ketoacidotic, hyperketonemic and normoketonemic patient groups. Plasma leptin level was lower in hyperketonemic patients than normoketonemic patients (10.4 +/- 13.7 vs. 20.5 +/- 19.8, p=0.012). Plasma leptin level was not different in hyperketonemic patients and diabetic ketoacidosis group (18.9 +/- 22.0 vs. 8.4 +/- 11.1, p>0.05), hospitalized and non-hospitalized patients (15.6 +/- 17.5 vs. 20.2 +/- 19.3, p>0.05) and mortal and non-mortal groups (13.6 +/- 11.2 vs. 14.5 +/- 12.0, p>0.05). A logistic regression analysis for hospital admission evaluated with predictors (initial values of urine ketone, anion gap, corrected pH, bicarbonate, glucose, leptin and point of care testing ß-HBA level) and confirmed that point of care testing ß-HBA measurement was an independent predictor for hospital admission (OR 2.57, %95 CI, 1.07 to 6.01, p=0.03). Conclusion: Our data suggest that hyperketonemia were associated with decreased plasma leptin level, but plasma leptin level was not associated with hospital admission and survival. Point of care testing ß-HBA level was found the only potentially predictor for hospital admission in our diabetic patient population.

PREVENTION OF "JET LAG" IN HEALTH STAFF ON INTERCONTINENTAL EASTWARD TRAVEL ACROSS 6 TIME ZONES

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Due to the increase in intercontinental patient repatriations, health staff are at risk of jet lag (tiredness, decreased ability to concentrate, decreased memory, decreased speed of visual perception and response capacity). The patient can suffer the consequences of any deterioration in the abilities of the medical team. Objective: To evaluate the efficacy of the implantation of non-pharmacological preventive measures to avoid jet lag in health staff traveling east across 6 time zones. Methods: A total of 5 subjects, members of the medical team, were evaluated during 3 transcontinental medical repatriations. Their stay at destination was a maximum of 48 hours. The medical team took the following steps: Adoption of the destination time at the beginning of the journey, privation of ambient light during the flight at night in the adopted time, exposure to sunlight and undertaking diurnal exercise during their stay at destination. The subjects filled in a form before the departure, 24 hours after arrival at destination and at on completion of the repatriation in Madrid. These forms examined: sleep latency, subjective sleep efficiency, subjective daytime sleepiness, memory capacity, capacity for logical analysis and reaction time. Results: No marked difference was found in any of the variables analysed in any of the subjects during the course of the journey. Conclusions: The adoption of the aforementioned steps can preserve good sleep quality, keeping a functional memory, capacity for logical analysis and response speed similar to the levels prior to starting intercontinental travel. Discussion: To date, the number of studies on the adverse effects of the proposed pharmacological treatment for jet lag is limited, and some of these drugs have not yet been approved by the Spain Medicines Agency, a situation also found in other European countries. In view of the present study, we would propose the adoption of non-pharmacological prophylactic measures.

IMPLEMENTATION OF A MANAGEMENT STRATEGY COMBINING CLINICAL PROBABILITY, D-DIMER TESTING AND ULTRASONOGRAPHY AMONG EMERGENCY DEPARTMENT PATIENTS WITH SUSPECTED DEEP VEIN THROMBOSIS

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Objective: To assess the feasibility of a management strategy based on an explicit clinical model for the diagnosis of deep vein thrombosis (DVT) in an emergency departement (ED) of an academic teaching hospital. Methods: Consecutive patients were evaluated by junior physicians who could take senior advice when deemed necessary. Patients were categorized as having a low, moderate, or high pretest probability (PTP) of DVT and then underwent D-dimer testing. Patients with negative D-dimer result had no further diagnostic testing. Compression ultrasonography (US) was performed in all other patients. If no abnormalities were seen on US imaging, patients in the low PTP group were considered not to have DVT, patients in the moderate PTP group returned 1 week later for a follow-up US and patients in the high PTP group underwent contrast venography. Patients in whom DVT was deemed absent were not given anticoagulants and were followed up for 3 months. Results: Ninety three patients were included. A normal D-dimer result ruled out DVT in 26.9% of the patients. Normal results on US combined with a low PTP excluded DVT in another 29% of the patients. The prevalence of DVT in the entire cohort was 8.6% and was 0%, 5%, and 85% in patients with low, moderate and high PTP, respectively, when senior advising was taken into account. The difference in rates of DVT between the three PTP groups was significant ($p<0.0001$). Junior ED physicians could also accurately classify patients into the three PTP groups ($p<0.001$). However, the management of the patients in the high PTP group was suboptimal since DVT was confirmed in only 46% of these patients. None of the patients in whom DVT was deemed absent developed venous thromboembolism during 3 months follow-up. Conclusion: Junior ED physicians could accurately apply a diagnostic strategy based on an explicit clinical model. However, senior physician advising improves the accuracy of the classification of patients into the three PTP groups.

ABDOMINAL PAIN ATTENTION IN AN EXTRAHOSPITALARY EMERGENCY DEPARTMENT (EHED)

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Objective: To analyze the working of an EHED by evaluating patients who complained from abdominal pain as the main symptom. Methods: During a period of 3 months (November-02 to January-03), 339 consecutive patients were registered. The way of access to our EHED was asked to all patients. Anamnesis and physical examination was carried out to all patients, and in those in which it was considered appropriate, other complementary tests (peripheral blood count, blood chemistry, urine analysis and simple radiography) were performed. Patients who required other tests not available in our center, were derived to the refer-

enced hospital. Results: The 51% of the patients came from the hospital emergency department, 41% came because of one's own initiative and the remaining 8% were derived by the primary care physician (PCP). The more frequent diagnoses in these 3 groups of patients were acute gastroenteritis (AGE) and unspecific abdominal pain (UAP), 63%, 57% and 52% respectively. The main diagnoses were: UAP (34%), AGE (22%), ulcerous dyspepsia (17%) and urinary tract infection (6%). A 6% of the patients required hospital assistance with the following final diagnoses: UAP (8 patients), acute appendicitis (2), neoplasm (3), and gastric ulcer, colonic diverticulosis, upper gastrointestinal bleeding, acute pancreatitis, gall bladder stones, hiatus hernia, chronic liver dysfunction and ascites due to liver cirrhosis (1 patient for each diagnosis). Conclusion: The high number of patients assisted, joined to the efficiency and resolutive capacity demonstrate the utility of our EHED, both for patients that come from one's own initiative or patients previously derived by the PCP or the hospitalary emergency department. One-third of the patients were diagnosed of UAP and they had a good evolution with symptomatic treatment. Only 6% of the patients required hospitalary assistance, and only 6 of them were admitted to the hospital.

THE NEED OF EMERGENT DIALYSIS FOR HYPERCALCEMIA IN A CHRONIC RENAL FAILURE PATIENT. A CASE REPORT

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It is well known that emergent dialysis is the treatment of choice for severe hypercalcemia complicated with renal failure. However, should the same rule be applicable for hyperparathyroidism-induced-hypercalcemia presented in patients with chronic renal failure? A fifty years old male patient presented to ED with two weeks history of progressive weakness on his left knee. He has ten years history of chronic renal failure with regular hemodialysis. Initial laboratory study revealed calcium level of 15.1 mg/dl. The reconfirmed result was 14.7 mg/dl. Although no severe neurological symptoms were present, the emergent dialysis was arranged immediately for the profound hypercalcemia, but patient refused the treatment and left the hospital on against medical advice (AMA). Ten days later the patient returned to our nephrology clinic and stated he had hemodialysis done in his usual dialysis center 2 days after ED visit. Further evaluation in clinic also confirmed the diagnosis of hyperparathyroidism. This case brings the question of timing for dialysis in a scenario as reported. There is no doubt that emergent dialysis could save a patient's life, but was this case a rare exception? What is a tolerable level of calcium for a patient like this? Should management of severe hypercalcemia be different for patients with acute and chronic renal failure? Further study and data collection are needed for solving this puzzle.

DEVELOPMENT OF A DECISION RULE TO SELECT, WITH HIGH SENSITIVITY, PATIENTS LIKELY HAVE A DRUG RELATED PROBLEM, AND TO BENEFIT FROM PHARMACIST SCREENING OF THEIR MEDICATIONS

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Unrecognized Drug Related Problems (DRP) are common among certain emergency department (ED) patients. Prior studies at our institution suggest that pharmacist screening (PS) of ED patients' medications can detect DRP not detected by the emergency physician. However, many ED patients take few if any medications. PS would be unlikely to benefit to these patients, but would increase patient care costs. Hypothesis: A decision rule can be created from evaluation of traits present more frequently among ED patients with DRP, using Chi-Square Recursive Partitioning. With a limited number of steps, this rule will have high sensitivity to select ED patients who are likely to benefit from PS, while permitting other patients to safely have PS omitted. Methods: A sample of at least 500 ED patients is being prospectively evaluated. Demographic data, medication lists, allergies, and chronic medical conditions are recorded. Patient sampling is representative of circadian patient ED visit frequencies, and includes all patients in the ED at the times of sampling, to minimize bias. DRP are judged as per Hepler and Strand. The Micromedex® drug information database determines drug interaction (DI) severity. Traits present significantly more often among patients with DRP will be eligible for inclusion in a decision rule designed to, in three to five steps, identify all patients with DRP. The decision rule should therefore permit safe and selective pharmacist screening for DRP. Preliminary Results: From the first 55 patients, 45.4% have a DRP, with 54.5% of the DRP being DI, and 21.2% of DRP being adverse drug reactions (ADR). This DRP frequency is greater than has been reported previously for non-selected ED patients. Updated data will be presented at the conference. Conclusion: Promising data suggests a decision rule to select a population of ED patients to screen for DRP in a safe, cost-effective manner can be derived, for subsequent prospective validation.

THE VEXATIOUS VITAL: A COMPARISON OF CLINICAL VERSUS ELECTRONIC MEASUREMENT OF RESPIRATORY RATE IN TRIAGE

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Background: Of all the vital signs, only Respiratory Rate (RR) is still measured clinically. The authors' experience at multiple centers is that RR recorded in triage shows low variability and accuracy. Objectives: To assess the method, duration, variability and accuracy of triage nurses' measurements of RR (RNRR). To compare RNRR with electronic measurement of RR (ERR) using transthoracic impedance plethysmography (TTIP), and with the World Health Organization gold standard (GSRR) of auscultation or observation for 60 seconds. Methods: Phase I (Blinded): 483 consecutive patients presenting to an urban teaching ED were enrolled in this prospective study.

Researchers observed triage nurses to assess how many seconds they spent and what technique they employed in measuring RNRR. Simultaneously, ERR was recorded via TTIP. Nurses were not aware that their measurements of RNRR were being observed. Phase II (Unblinded): 187 subjects were enrolled.The same protocol was employed, but the nurses were now aware that RR was the focus of the study and that their measurements were being observed. In addition, during each triage evaluation, the research assistant now took gold standard measurements of RR by observation and auscultation for 60 seconds each (GSRR), in addition to collecting RNRR and ERR. Results: Observation was the only method used by nurses to measure RNRR. 90% of RNRR measurements were obtained with a recording period of 0-15 seconds. RNRR showed low variance (13.1) compared with ERR (27.8) and GSRR (37.0). Neither RNRR nor ERR was accurate relative to GSRR. Conclusions: Nurses in our busy ED do not have time, in the rush of triage, to spend 60 seconds measuring RR. Neither triage nurses nor TTIP provided accurate measurements of RR. Emergency Physicians should examine other electronic modalities for measuring RR, in order to bring RR into line with other vital signs. In the absence of a good electronic alternative to clinical measurement, EDs should consider new clinical strategies, or consider abandoning routine triage measurement of RR altogether .

A FORGOTTEN ECTOPIC PREGNANCY: CORNUAL/INTERSTITIAL PRESENTATION

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Objectives: The treatment of ectopic pregnancy is straightforward; diagnosis remains challenging especially when it is a cornual or interstitial. Symptoms are vague or suggestive of another pathology. High suspicion remains the key to early diagnosis and intervention. Incidence of cornual/interstitial pregnancy is 1-2% of all ectopic pregnancies. Method: A retrospective chart review and review of literature was conducted. Results: A healthy 39-year-old gravid 4 para 3 history of urolithiasis presented ambulating with urinary discomfort and right flank irradiation. Last menstrual period was 11 weeks prior to evaluation. Positive home pregnancy test without prenatal care was reported. No nausea, vomiting, loss of appetite, vaginal secretions or bleeding reported. A previous cesarean section, followed by vaginal birth, and lysis of adhesions were her only surgical interventions. Vital signs were stable. Physical exam was essentially negative except for positive right costovertebral angle tenderness. Laboratory findings confirmed pregnancy and hematocrit of 31.5% with 1-3 RBC's on urinalysis. Transvaginal sonogram revealed an empty uterus with eccentrically located cardiac activity and free fluid on cul-de-sac. During sonogram, patient developed signs of peritoneal irritation. Patient underwent exploratory laparotomy. Besides hemoperitoneum, a ruptured ectopic pregnancy was located at the right cornua, adhere to the right ovary and the anterior abdominal wall. Discussion: A cornual/interstitial pregnancy is difficult to diagnose. It is imperative for it be included in differential diagnoses of any pelvic pain. True cornual pregnancies, which constitute 1-2% of all ectopic pregnancies, are associated with increased morbidity. Rupture of cornual/interstitial pregnancies is usually later in gestation than most ectopics and frequently produces massive hemorrhage upon rupture.

PORTUGUESE MAN OF WAR STINGS: CASE REPORT AND REVIEW OF LITERATURE

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This case is about a 5 year old boy who presented to the emergency department three hours after being stung by a bluish-purple jellyfish while bathing in a beach. The patient came in complaining of excruciating, burning pain on both arms and hands. After evaluating and stabilizing the patient, the description of the jellyfish and the findings on physical exam pointed to the Portuguese Man of War as the causative agent of this patient complaint. The Portuguese Man of War (Physalia physalis) is a member of the Hydrozoa class, one of the 4 classes that jellyfish are categorized. This class is commonly found in the Pacific, Atlantic, Indian Ocean and the Caribbean. Many cases of envenomation by the Physalia species have been reported in the east coast of Australia, Florida and Hawaii. However, in Puerto Rico such envenomations are rare. For the past 15 years, only 2 cases of Physalia stings have been reported to the Puerto Rico Public Health Department. The only previous report of a Portuguese Man of War sting placed the victim at the intensive care unit. Thus, since no record of frequency is available, Physalia physalis sting in the waters surrounding the island of Puerto Rico could be more common than expected and should always be kept in mind when evaluating patients complaining of this kind of environmental exposure.

CAN VENOUS BLOOD GAS REPLACE ARTERIAL BLOOD GAS IN EMERGENCY PATIENTS?

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Objectives: Venous blood gas (VBG) measurements are less aggressive than arterial blood gas (ABG) and values are correlated except for PO2. The use of VBG for clinical decision making has not been assessed in emergency department patients. Methods: We prospectively included all adult patients in whom an ABG was ordered. Clinical context was defined as suspected acid-base disturbances, respiratory failure or suspected pulmonary embolism. ABG and VBG were drawn and processed in immediate randomized succession. ABG results were transmitted to a referent physician for security. VBG results were available to the treating physician for diagnosis, therapeutic decisions and disposition, with all other clinical and lab data ordered in the usual manner. Treating physician decisions were collected on a data sheet. The ABG results were secondarily disclosed to the treating physician. The primary outcomes were modifications in diagnosis, treatment, or disposition, after knowing the ABG results. All patients gave informed consent. The estimated number of patients to include was 150. Results: The study included 209 patients of 275 who had an ABG. Median age was 76 years (q1:56–q 3:85). ABG and VBG values of pH, pCO2 and CO2T were well correlated (r2 = 0.89; 0.79; 0.85 respectively). The clinical decision was modified 22

times i.e. 10.5% (95% CI: 6.7–15.5). Types of modification are reported in table I. Hypoxia was the most frequently modified diagnosis on ABG. Oxygen was added 7 times out of 9 and 2 patients were admitted to ICU. Six times hypoxemia was initially apparent on EtcO2. Conclusions: Less aggressive VBG can replace ABG in most occurrences. Correlation values have to be determined in every institution.

DIGITAL PALPATION IN EVALUATION OF ELEVATED INTRA-OCULAR PRESSURE USING A NON-LIVING PORCINE EYE MODEL

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Background: Evaluating intra-ocular pressure is important in the patient with eye pain. Glaucoma frequently presents unilaterally. Equipment to measure ocular pressures may not be readily available. Medical literature indicates that digital palpation may be used as a tool in the eye examination. Objectives: To determine the reliability of digital palpation in the assessment of elevated intraocular pressures. Methods: Porcine eyes were harvested postmortem and stored in normal saline. 22-gauge angio-catheters were placed posteriorly and advance to the anterior chamber of each globe and connected to a 3-way stopcock valve. Normal saline was injected and pressures adjusted using a Tono-pen ®. Emergency medicine students and residents were in-serviced on digital palpation. Individually, each blindly evaluated paired eyes - one normal and one with elevated pressure. A blinded observer recorded their results. Results: N= 10. 20mmHg vs. 20mmHg - 71% detected the same pressure. 20mmHg vs. 25mmHg - 37% detected the difference in pressure. 20mmHg vs. 30mmHg - 100% detected the difference in pressure. 20mmHg vs. 40mmHg – 89% detected the difference in pressure. 20mmHg vs. 50mmHg - 100% detected the difference in pressure. Conclusions: Digital palpation may be used to determine elevated ocular pressures. Limitations: Animal model, nonliving tissue, small sample.

A STUDY TO DEVELOP A CLINICAL DECISION RULE FOR THE USE OF BLOOD COAGULATION TESTS IN PATIENTS ATTENDING THE EMERGENCY DEPARTMENT

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Objective: To develop a clinical decision rule that will predict clotting abnormalities in patients attending the emergency department, thereby assisting clinicians in being more selective in their use of laboratory tests. Design: Retrospective survey of emergency department patient records over a one-month period. Setting: University hospital emergency department. Participants: 913 patients who had blood coagulation tests, consisting of activated partial thromboplastin ratio (APTR) and international normalized ratio (INR), and who were not already receiving anticoagulants. Interventions: We reviewed the records of all participants with an APTR of > 1.15 and / or an INR of >1.4 for a range of standardized clinical variables. Outcome Measurements: Variables were assessed for association with an abnormal APTR and / or INR. Preliminary Results: Our data suggest that most of the 103 patients who had abnormal clotting also showed one or more of the following variables: Excessive alcohol intake, clinical jaundice or known liver disease, significant blood loss, sepsis or shock of other causes, personal or family history of clotting abnormalities, staggered or late presentation of paracetamol overdose, or cardiac arrest. Conlcusion: If formal statistical analysis of our data and future prospective validation enables the development of a highly sensitive clinical decision rule, this may permit clinicians to safely reduce the number of blood coagulation tests ordered in emergency department patients.

RETROSPECTIVE ANALYSIS OF CT EXAMS ORDERED BY THE EMERGENCY DEPARTMENT PHYSICIANS IN MURES COUNTY UNIVERSITY EMERGENCY HOSPITAL

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Background: In our hospital, CT examination of patients in the emergency department was reserved mainly for patients with severe head trauma or in coma of unidentified origin. Chest and abdominal trauma were rarely examined by CT. Just three years ago, the total number of CT exams was not more than 200/ year in a department receiving over 20,000 patients. Patients with CVAs were examined only after they were admitted to the Neurology department leading to a significant delay in establishing the final diagnosis and to decide whether neurosurgery is necessary. Under the pressure of emergency department physicians, during the last two years, more and more CT exams for different suspected pathologies were performed, leading to a better evaluation of emergency patients and establishing a fast and final diagnosis in a large number of cases. Methods: A retrospective analysis of CTs ordered by EPs was performed over a one year period. Number of patients, CT exams requested, and results obtained were evaluated. Results: During the year 2002, 23,900 patient charts were verified. 1,695 (7%) of patients had a CT examination. 70% of the patients who had a CT had positive findings which influenced the admission or treatment decision. Conclusions: Though the CT exam was considered to be limited to trauma and nontrauma neurological cases, recently a major change is being observed in our department where EPs are more frequently using this evaluation tool. Our hospital radiology department finally seems to have accepted the fact that EPs can order CT exams directly, though in the rest of the country the limited ability of EPs to order CT scans is still a major problem. The results of our retrospective study show that in 70% of cases, the CT ordered by EPs had a positive finding influencing the emergency department physician decision as well as the admission or discharge decision.

INTERHOSPITAL TRANSFER PROTOCOLS OF CRITICAL ADULT AND PEDIATRIC PATIENTS IN ROMANIA

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Background: During the last few years, several critical cases died during transfer between hospitals in Romania, even during short distance transfers. One of the main reasons we could identify was the lack of transfer protocols that would define the responsibilities and the minimal standards and guidelines that have to be taken into consideration in a critical patient transfer. Methods: The RSEDM, in collaboration with Brigham & Women's hospital, elaborated the Romanian Transfer Protocols and Guidelines using several US and European transfer protocols as a baseline and adapting these protocols to the Romanian situation and needs. The protocols were then submitted to the Romanian college of Physicians in order to approve them. The protocols were published in a brochure and are getting distributed to all hospitals and Health Departments in Romania. Outcome expected: With the introduction of the new protocols, we expect and hope to reduce mortality and complications during inter-hospital transfer of critical patients. By the identification of responsibilities of each transferring party, we wish to reduce the delay in starting the transfer procedure in critical patients who need to get to more advanced facilities to receive proper treatment. In this poster, we are presenting the transfer protocols and guidelines adopted by the Romanian Society for Emergency & Disaster Medicine and the Romanian College of Physicians.

SUCCESSFUL ANGIOGRAPHY STENTING TREATMENT OF ANEURYSM OF THE SUPERIOR MESENTERIC ARTERY: A CASE REPORT

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Introduction: An aneurysm is defined as a pathologic dilatation of a segment of a blood vessel. A true aneurysm involves all three layers of the vessel wall and is distinguished from a pseudoaneurysm, in which the intimal and medial layers are disrupted and the dilatation is lined by adventitia only and sometimes by perivascular clot. Visceral artery aneurysms are an uncommon form of vascular disease that have a significant potential for rupture or erosion into an adjacent viscera, resulting in life-threatening hemorrhage. Superior mesenteric artery aneurysms are rare, comprising only 8% of all visceral artery aneurysms. Aneurysms at the site are very susceptible to rupture, irrespective of size and may be difficult to manage even in the case of elective surgery. Case report : We report a case of a 53-year-old man with aneurysm of the superior mesenteric artery (SMA) demonstrated by multislice CT images with multiplanar reconstruction and percutaneous transluminal angiography. He was sent to our emergency department (ED) due to epigastric pain for 2 days and severe abdominal sharp pain, abdominal fullness for 1 hour. He was successfully treated by emergent stent insertion. The patient has remained asymptomatic with full employment. Discussion: Traditionally, the most common surgical approach to SMA aneurysms is simple ligation of the proximal and distal vessel. Other techniques for repair of SMA aneurysms include aneurysmectomy, and aneurysmorrhaphy. Our patient was treated by successful angiography stenting. We believed that vascular stenting could be an alternative and less invasive treatment of visceral artery aneurysms. And, visceral artery aneurysm should be enrolled in the differential diagnosis of acute abdominal pain.

COMPARISON OF BODY TEMPERATURE MEASUREMENTS USING INFRARED RECTAL TYMPANIC AND THERMOCOUPLE THERMOMETER

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Introduction: There was an outbreak of severe acute respiratory syndrome since April 2003. Based on the recommendation from world health organization, mass screening of body temperature was established at entrances of our hospital. Accuracy of measurement is essential to decide whether there is fever or not. We performed this study to compare temperatures obtained from rectum, tympanic membrane, forehead, and infrared (IR) thermography. Material & Method: After excluding the unsuitable cases, patients in three ICUs were enrolled for comparison between rectal, tympanic membrane and forehead skin temperatures. Rectal temperatures were measured by mercury-glass thermometer, tympanic temperatures and forehead temperature were checked three times by tympanic membrane thermometers (9000, Welch Allyn, USA; ThermoScan pro3000, Braun, Germany) and forehead thermometer(Thermofocus 01500, Techimed, Italy). Averages of these measurements were compared with the rectal temperature and agreement was calculated. An IR thermographer (Beyond the Visible, Opgal, Israel) was set up at the main entrance. It alarms when the body temperature scanned exceeds the threshold. Temperatures were double checked in every one alarmed and randomly in others with tympanic membrane thermometer. Differences between days with and without sunshine were also compared. Result: Good agreements were obtained between tympanic membrane and rectal measurements (95% CI was in 9000, WA; in ThermoScan pro3000, Braun). The ones obtained by forehead thermometer were less satisfactory to tympanic thermometer (95% CI:Thermofocus mod 01500/N1,Tecnimed). Different results were obtained by IR thermographer at different threshold settings. The best result was obtained with threshold of 37.6 ^{o}C (sensitivity 94%/specificity 62.82%). Significant interference was found in sunny day when the heated hair often makes the false alarm. Ingestion of hot food or beverage, blocking hat and clothes can make the measurement unreliable, too.
Discussion: In comparison with the classical temperature measurement by mercury-glass thermometers, good agreements can be obtained by tympanic membrane thermometers. Forehead thermometer and IR thermographer have limited agreement and results of measurement are easily interfered by environmental heats. However, the convenience and low cost of utilization of forehead thermometer and especially the IR thermographer can not be overcome by the tympanic membrane thermometer, not mention to the traditional thermometers. Adequate use of such apparatus with cautions to avoid interferences and double check of suspicious cases by tympanic thermometer should be the best way for mass-screening of body temperature.

RADIOLOGICAL REVIEW OF ACCIDENT AND EMERGENCY CHEST AND ABDOMEN RADIOGRAPH ; A TWO WEEK AUDIT

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This study examined the concordance of radiographic readings between emergency department(ED) Attending physicians and radilogists.In addition, the incidents of misinterpretations leading to an alteration in patient care were also reviewed.All chest and abdomen radiographs obtained from August 4th through August 17 th 2003 will inintially be interpreted by ED attending physicians with susquent final review by a radiology consultant.Misread radiograpg will be placed in to one of three categories. The groupings included overread radiograpg with no change in treatment,underead radiographs with no change in treatment, and radiograph misinterpretations with a change in treatment.

RELIABILITY OF THE GUM ELASTIC BOUGIE AS A TRACHEAL INTUBATION DETECTION DEVICE

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Introduction: Early detection of an inadvertent esophageal intubation can be particularly challenging in cases when the current standard of CO2 detection is unreliable. While multiple devices currently exist for esophageal intubation detection, their uses are variably limited. We sought to determine the reliability of an inexpensive and portable device, the gum elastic bougie (bougie), as a tracheal intubation detection device. Methods: We conducted a prospective, blinded trial in 20 human cadavers. Each cadaver was randomized to a series of 5 esophageal and tracheal intubations. Each intubation was assessed with the bougie twice; once by a novice to the technique and once by an assessor who was constant through the trial. Assessors used the bougie to “feel” for clicks of the tracheal rings and to appreciate “hang up” of the bougie as it was advanced into the smaller airways. Absence of these findings was presumed to indicate an esophageal intubation. Actual placement was confirmed by bronchoscopy. Each assessor made an independent determination of tube location. Descriptive statistics are used to summarize the data. Results: Overall, 93% (95%CI, 86-97) of tracheal placements were correctly identified. The constant assessor was able to correctly identify 98% (95%CI, 90-100%). Tracheal rings were detected in 92% of tracheal placements. Ring “clicks” were 95% specific for tracheal intubation with an overall positive predictive value (PPV) of 95% and negative predictive value (NPV) of 92%. Hang up was detected in 100% of tracheal placements with a specificity of 84% and PPV of 86%, NPV of 100%. Overall, 95% of esophageal intubations (95%CI, 88-98) were detected. The constant assessor detected 100% of esophageal intubations. Conclusion: The gum elastic bougie is a reliable device for distinguishing tracheal and esophageal tube placement.

BIAS EVALUATION AND ACCURACY VALIDATION OF THE 90-DEGREE-METHOD FOR PULSE OXIMETRY IN VENTILATED CRITICALLY ILL PATIENTS

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Objective: Pulse oximetry is the standard procedure in both emergency and intensive care medicine. As nail polish may interfere with this, it is recommended to remove it or to rotate the sensor probe by 90 degrees to eliminate or minimize faulty results. The aim of this study was to validate the accuracy of pulse oximetry after sensor rotation by 90 degrees and to evaluate this procedure in ventilated critically ill patients with natural, unpainted fingernails. Methods: Ventilated critically ill patients of the intensive care unit participated in this study approved by the local ethics committee. Oxygen saturation (SpO_2) was measured at all fingers with a pulse oximeter (SC1281, Siemens/ Germany and Sensor Nellcor™ DS-100A) in conventional position and rotated by 90 degrees. In parallel, an arterial blood gas sample (SaO_2) was taken as a reference. The bias was calculated as $\hat{A}=SpO_2\text{-}SaO_2$ and $^{90°}\hat{A}=^{90°}SpO_2\text{-}SaO_2$. Analysis was done with SAS® (Release 8.02) using t-test for paired values. $P<0.05$ was supposed to be significant. Results: 10 patients (6m, 4f, 55±17 [20-74] years) with a mean SaO_2 of 97.6±1.1 [95.8–98.7]% were investigated. Mean SpO_2 was 97.1±1.8 [92–100]% and mean $^{90°}SpO_2$ 97.5±1.7 [93–100]%. The mean bias was $\hat{A}$=-0.4±0.32% and $^{90°}\hat{A}$=0.0±0.44%. In all measurements the variation coefficient was <2.29% and the mean bias was within ±2%. Confidence limits showed no statistically significant discrepancy (a=5%), t-test no significant differences between fingers. Conclusion: There are no significant deviations and no clinically relevant differences between fingers in measurements performed either in the regular way or rotated by 90 degrees. Minimal deviations are explainable by specific inaccuracies of the instrument [2]. If false results are anticipated, the sensor might safely be turned by 90 degrees.

A DENTAL ABSCESS: WHEN IT COULD BECOME A LIFE THREATENING EMERGENCY

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Pyogenic infections of the orofacial zone have often odontogenous origin. Recent studies have confirmed again that the first cause of deep neck abscesses and Descending Necrotizing Mediastinitis (DNM) are lower molar located teeth abscesses and that mortality rate remains high, in spite of a suitable and timely treatment. Most of the times, such abscesses, remain localised and circumscribed; nevertheless, they occasionally move down along the neck, migrating among cervical spaces and fasciae. Complications like retropharyngeal and mediastinic phlegmons, pleural and pulmonary suppuration and hematic dissemination of the infection to distant organs show the potentially mortal nature of these infections. In all these cases, the extrinsic compression of the respiratory airways is a very dreadful event, as it is capable of causing asphyxia in such short a time

that emergency surgeons are often caught unprepared. We report the case of a man of fifty, obese and affected by alcoholic cirrhosis, who was taken to our department in state of intense respiratory insufficiency, with laryngeal stridor, tirage, low peripheral saturation. In the previous days he had revealed pain and swelling in the neck zone, and the same day of the hospitalisation he had undergone an odontological operation because of a dental abscess. In a very short time, the clinical conditions of the patient deteriorated. The almost complete obstruction of the upper respiratory airways (confirmed by CT scan), requested a fiberoptic made orotracheal intubation with consequent emergency tracheotomy, causing an anoxic state followed by epileptic fits and subsequent heart attack. After fifty days of intensive care and a consistent physiotherapy period, the patient could be back to his normal life. Most of the times, it is easy to make a diagnosis of neck phlegmon or necrotising fascitis, based on the anamnesis, the physical examination and radiological examinations. Reddening of the cutis, swelling, pain, fever, leucocitosis, trismus, respiratory difficulties are the most common symptoms of the neck phlegmon. Particular attention must be paid to dispnea, as epiglottitis, laryngospasms or complete obstructions of upper airways due to edema could imply such a compromised condition of the respiratory airways as to make every kind of therapy fruitless. The diagnosis must be a rapid one, as the prognosis depend on the precociousness of the therapy: a quick check of the airways, the surgical drainage of the infection, together with daily hydrogen peroxide washing and suitable antibiotic administering are the basic principles for the treatment of such pathologies.

DO THE RESIDENTS IN THE EMERGENCY DEPARTMENT APPROPRIATELY MANAGE PATIENTS WITH ACUTE ASTHMA ATTACK? A STUDY OF SELF-CRITICISM

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Objectives: To investigate the management of patients with asthma attack admitted to emergency department (ED) in terms of international guidelines. Methods: We evaluated the records of patients with asthma who were admitted to the University-based ED between December 2001 and December 2002. Data pertinent to the complaints, findings and laboratory results as well as treatment notes and discharge recommendations were sorted out from the ED charts. Results: A total of 72 cases (53 female), whose data have been available were evaluated retrospectively. Twenty-six patients (36.1%) had been admitted more than once in the study period. The number of admissions ranged from two (15 patients, 20%) to 11 (two patients, 2,8%). April and May were the two months with the highest admission rates (a total of 29 cases, 40.2%). PEF measurements had been recorded in 17 (23,6%) on presentation. Pulse and respiratory rates were recorded in 70 (97%) and 67 patients (93%), respectively. 34 patients (47,2%) underwent chest X-ray and most were normal. Salbutamol was the most commonly used drug as the first line therapy (93). Ipratropium bromide, inhaled and systemic corticosteroids were added to the therapy in 47 (65,2%), 42 (58,4%), and 32 cases (44%) respectively. Chest physicians were counselled in only seven patients (9,7%). Mean period the patients stayed in the ED was 3,9±3,4 hours. Three patients were hospitalized (4,2%) and the others were discharged. Thirty patients were prescribed corticosteroids on discharge (% 43,4). Conclusion: Guidelines for diagnosis and treatment fail to achieve their goal. The emphasis on asthma in the curricula of emergency physicians should be optimised. The role of functional parameters in determining asthma severity and monitoring treatment effects should be enlightened in the clinical practice. Finally, more prevalent utilisation of management guidelines will help determine the extent to which they could be useful.

A RANDOMIZED CONTROLLED TRIAL OF MIST IN THE ACUTE TREATMENT OF MODERATE CROUP

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Purpose: To determine if the use of mist improves clinical symptoms in children presenting to the emergency department with moderate croup. Methods: Children 3 months to 6 years of age were eligible for the study if they presented to the emergency department with moderate croup. Moderate croup was defined as a croup score of 2-7. The patients were randomly assigned to receive either mist (humidified oxygen) via mist stick or no mist. The patients had croup scores measured at baseline and every 30 minutes for up to two hours. At these intervals the following parameters were also measured: heart rate, respiratory rate, oxygen saturation and patient comfort score. The patients were treated until the croup score was less than 2 or until two hours had elapsed. All patients initially received a dose of oral dexamethasone (0.6 mg/kg). The research assistants were unaware of the assigned treatments. Results: There were 71 patients enrolled in the study, 35 received mist and 36 received no mist. The two treatment groups had similar characteristics at baseline. The median baseline croup score was 4 in both groups. The outcomes were measured as the change from baseline at 30,60,90 and 120 min. The change in the croup score from baseline in the mist group was not statistically different from the croup score change in the group that did not receive mist (p= 0.39). There was also no significant difference in improvement of oxygen saturation, heart rate or respiratory rate at any of the assessment times. There were no adverse effects from the mist therapy. Conclusion: Mist therapy is not effective in improving clinical symptoms in children presenting to the emergency department with moderate croup.

TRAINING OF MEDICAL STUDENTS IN AIRWAY MANAGEMENT : A COMPARISON OF THE STANDARD LARYNGEAL MASK AIRWAY, THE COMBITUBE AND THE ENDOTRACHEAL TUBE

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Objective: To evaluate the use of alternative devices by junior officers to secure an airway by comparing the ease of successful insertion, and skills retention of the laryngeal mask airway (LMA), the oesophageal-tracheal combitube (ETC) and the endotracheal tube (ETT). Methods: This was a prospective cohort study of 93 third-year medical students who were taught the use of LMA, ETC and ETT with skills tested at 0 and 6 months. Results: There was significant difference ($p<0.005$) between the mean times for insertion of the LMA

(32.1 s) compared to the ETC (55.0 s) and the ETT (71.5 s). The differences in mean times between 0 and 6 months were 13.6 s (LMA), 29.6s (ETC) and 31.6s (ETT) ($p<0.005$). More students needed more than one attempt inserting the ETC (31 vs 8) and ETT (32 vs 17) but not the LMA (6 vs 4) at 6 months. There were significantly more oesphageal intubations (20 vs 5) and more failures (6 vs 2) with the ETT at 6 months whereas only one failed LMA and no failed ETC insertions. Conclusions: There is a significant deterioration in the speed and skills in securing the airway over time. Junior doctors should be taught the LMA as a rescue airway device in the event of failed endotracheal intubation.

DIFFICULT AIRWAY EQUIPMENT IN DEPARTMENTS OF EMERGENCY MEDICINE IN IRELAND: RESULTS OF A NATIONAL SURVEY

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Objective: Adverse effects associated with difficult airway management can be catastrophic and include: death, brain injury, and myocardial injury. Malpractice claims have shown prolonged and persistent intubation attempts to be the most common situation leading to disastrous respiratory events. To date there has been no evaluation of the types of difficult airway equipment currently available in Irish departments of emergency medicine. The objective, therefore, of this survey was to identify the difficult airway equipment available in Irish departments of emergency medicine. Methods: Departments of emergency medicine in the Republic of Ireland with at least one dedicated Emergency Medicine consultant were surveyed via telephone. Results: All of the departments contacted held at least one alternative device on site for both ventilation and intubation. Conclusion: There was no department without an alternative device for intubation or ventilation. 89% of EDs had more than one device for definitive airway management. In the majority of EDs a surgical airway is the only alternative intubating device. Irish departments of emergency medicine compare well with those in the UK and USA when surveyed concerning difficult airway equipment. However we believe that this situation could be further improved by training inexperienced healthcare providers in the use of the laryngeal mask airway and intubating laryngeal mask airway, by placing greater emphasis on the ready availability of capnography and by the increased use of portable difficult airway storage units.

EMERGENCY INTUBATION IN THE RESUSCITATION ROOM, IN AN IRISH UNIVERSITY TEACHING HOSPITAL: RESULTS OF A 50 PATIENT CASE REVIEW

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Objectives: Safe airway management is the prime objective for clinicians in the emergency department resuscitation room. In the resuscitation room at Cork University Hospital either anaesthetists or emergency department doctors manage airway intubation depending on the availability of experienced personnel. A recent Scottish study has shown that there is little difference in the rate of complications experienced by emergency department personnel when attempting intubation when compared to anaesthetists. To date no such study has been carried out in Irish resuscitation rooms. Thus the objective of this survey was designed to see if there was a difference in the complications experienced by the groups surveyed. The opportunity was taken to compare other parameters required in airway management such as the indications for intubation and equipment used. Methods: All those performing intubation in the resuscitation room were asked to complete a proforma following the procedure. Results: The complication rate between the two groups was low and comparable to other studies. Although two thirds of intubations were performed by anaesthetists, all emergency department intubators had some anaesthetic training. Methods of intubation were similar in both groups. There were no major complications in either group. Conclusion: Emergency department personnel performing intubation in the resuscitation room were generally as safe as their anaesthetic counterparts. We believe this standard can be maintained by ensuring that only those with formal anaesthetic training perform this task in the resuscitation room.

SUCCESS, COMPLICATION, AND SURVIVAL OF PATIENTS WITH ATTEMPTED PRE-HOSPITAL PLACEMENT OF AN ESOPHAGEAL-TRACHEAL COMBITUBE (ETC)

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Objectives: To observe success and complication rates of paramedics placing an Esophageal Tracheal Combitube (ETC) as a rescue airway, and to compare success rates to endotracheal tube (ETT) intubation. Placement with successful ventilation was the primary outcome, with complication rates, survival to admission and discharge alive as secondary measures. Methods: Retrospective review of three years of Emergency Medical System's (EMS) patient charts for ETC attempts. ETC complications were defined a priori. Abstracters were hypothesis-blinded, trained and monitored (Kappa =.7-1.0). This EMS system uses the ETC primarily as an alternative airway to failed ETT. Pharmacologically assisted intubation is not used. ETT patient controls were selected from the EMS QA database for the same period. We reviewed hospital charts when available and graded neurologic outcome on a modified Rankin Scale. Data for ETT patients was from the first day of each month during the same three-year period. Results: ECT insertion was attempted on 162 patients: 113 (70%) successful, 46 (28%) failed, and three (2%) not recorded. An ETT was attempted for 128 control patients: 107 (84%) successful, 21 (16%) failed. (OR for ETT vs. ECT 2.1, 95% CI 1.12 – 3.86).ETC location was noted in 90: 76 (84%) esophageal, 14 (16%) tracheal. Inability to pass the ETC occurred in 29 (18%), accounting for 48% (22/46) of failures. The ETC caused one patient dental trauma, and one ETC placement was temporally related to the onset of subcutaneous emphysema. Blood in the ETC from pre-existing active upper GI bleeding occurred in nine patients (6%) and four tubes (3%) dislodged in route to the hospital. The a priori complication rate was 44/162 (27%). Inability to determine

placement of the ETC was due to emesis from both ports in 21 cases. Including these which were not identified as complications a priori, the overall complication rate was 65/162 (40%). Eighty-five EMS charts (52% of ECT attempts).

CPAC AS A PART OF A PRELIMINARY TREATMENT OF ACUTE CARDIOGENIC LUNG EDEMA

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Treatment of acute severe pulmonary edema has undergone some changes over the years and different physicans have used different methods of treatment. For many years it has been known that there is penetration of liquid to the lung vesicles in the case of acute severe pulmonary edema, and treatments strove to reduce the amount of liquid in a variety of ways. Treatments have included leeches, blood letting, and blocking of the veins in the hands and legs. All treatments tried to reduce the venous return to the heart.

Until recently, treatments to reduce the blood pressure and blood volume were based on administering variables (furesemide), in addition to oxygen and morphine. In addition, aminophiline was administered in cases of bronchial spasm, and the use of digoxin was limited to cases that exhibited an obvious reason to do so e.g., in cases of acute severe pulmonary edema with atrial fibrillation. In later periods, mechanical ventilation was introduced as a treatment option. This option was used when previous methods were judged to be a failure. Starting in the 1980's, the CPAC (Continuous Positive Airway Pressure) method was introduced. There are many reports describing the advantages of using the CPAC method and the fact that with many patients, it eliminates the need for using an endotracheal tube and mechanical ventilation. In this poster we present a retrospective comparison between the treatment of acute severe pulmonary edema with CPAC and treating it with conventional methods. In addition, we will present our conclusions regarding the advantages of using CPAC in the case of acute severe pulmonary edema.

NON-INVASIVE MECHANICAL VENTILATION IN THE EMERGENCY DEPARTMENT: EXPERIENCE OF AN INTERMEDIATE CARE UNIT

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While non-invasive ventilation (NIV) is crescently reagarded as an emerging supportive technique for the Emergency Department (ED), the extension of its use in this setting is poorely documented. In order to point out the impact of NIV in the daily routine of our institution, we retrospectively evaluated the activity of our Intermediate Care Unit in respect of patients udergoing mechanical ventilation for acute respiratory failure in a period of six months (01/01-30/06/2003). In this area, supplied with invasive and non-invasive ventilation and monitoring facilities with a nurse: patients ratio of 1:4, patients necessitating of hemodynamic or respiratory stabilization for different underlaying diseases are admitted from the Emergency Room. Non-invasive ventilation is taken on and patients are selected according to accepted and previously published protocols (Meduri GU, Clin Chest Med 1996;17: 513-553). Face-mask CPAP with a flow generator or PSV + PEEP via face-mask with a 740 PB ventilator are performed on the basis of the cause of respiratory failure and physician's judgement. For the considered period, cause of respiratory failure (Etio), lenght of stay (LOS), and the unit of destination after ventilatory treatment were recorded for each patient. Out of 1137 patients admitted in this area in six months, 321 (28.2%) received mechanical ventilation. Of these, 57 (18.8%) had to be intubated to protect the airways for non-respiratory diseases (stroke, post-anoxyc coma, shock, brain injury); 28 (8.7%) respiratory patients met the criteria for immediate intubation for clinical and blood gas-analysis deterioration. In these patients causes of acute respiratory failure were: COPD exacerbation (14), Cardiogenic Pulmonary Oedema (10), Community Acquired Pneumonia (2); Lung cancer (2). Two patients of this group (7.14%), both with CPO, died. Average lenght of stay was 3.36 days (1-15; SD 2,76), before patients were sent to Respiratory Intensive Care Unit (13), Intensive care Unit (4), Cardiology ward (2), General ward (6). Data concerning the 236 (73.5%) noninvasively ventilated patients are resumed in the table:

Pts. N°	Etio	Av. LOS (days)	RICU	Gen. W.	ICU	CARDIO	DEATHS
59	COPD	1.9 (1-4; SD 0.75)	45 (76.3%)	11 (18.6%)	2 (3.4%)		1 (1.7%)
137	CPO	1.6 (1-4; SD 0.69)		94 (68.6%)	1 (0.7%)	39 (28.4%)	3 (2.2%)
21	CAP	2.7 (1-6; SD 1.44)	11 (52.3%)	9 (42.8%)		1 (4.7%)	
8	Cancer	1.5 (1-2; SD 0.53)	2 (25.0%)	6 (75.0%)			
1	ALI	2	1				
4	Restrictive	2.5 (2-4; SD 1.00)	3 (75.0%)		1 (25.0%)		
1	N.muscolar	2	1				
2	Inhalation	2.5 (2-3; SD 0.70)	1 (50.0%)	1 (50.0%)			
1	Empiema	1			1		
1	Stroke	1		1			
1	P. Embolism	1		1			
Tot: 236		1.8 (1-6; SD 0.84)	64 (27.11%)	123 (52.1%)	5 (2.11%)	40 (16.9%)	Tot: 4 (1.7%)

Of these patients 5 presented clinical deterioration during face-mask NIV and had to be intubated (2 CAP; 1 CPO; 1 lung cancer; 1 COPD), 6 continued succesfully NIV after initial deterioration substituting face-mask with an helmet interface (COPD 3, CPO 2, CAP1). Thus, failures of face-mask NIV were 11/236 (4.6%). These data suggest the following conclusions: 1) Mechanical ventilation represents an important issue in the daily work of an Emergency Department, NIV in particular needs to be part of every emergency Physician's background; 2) on an average, most patients are non-invasively ventilated in the ED for the first 48 hours. Many authors indicate in this period the most strathegic for success of the treatment: a high level of motivation, availability of expert personnel on a 24h basis, and a proper training are needed in the attending staff. A strict cohoperation with RICU physicians and cardiologists is advisable, considering, as expected, that the majority of these patients experience cardiogenic pulmonary oedema and COPD exacerbations and that many of them continue NIV in their units. 3) The application of NIV according to standardized protocols, concerning methods and patients selection seems to be successful and safe, provided a strict monitoring and the possibility to use more invasive techniques is available in the case of deterioration.

THE INSECURE AIRWAY: A COMPARISON OF KNOTS AND COMMERCIAL DEVICES FOR SECURING ENDOTRACHEAL TUBES

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Background: Endotracheal Tubes (ETTs) are commonly secured using adhesive tape, cloth tape, or commercial devices. Adhesive and cloth tape have been reported equally effective, but there has been no experimental comparison of cloth tape tied with different knots. Movement of an ETT by as little as 3cm may be life-threatening. Objectives: To compare rates of failure of the following methods: cloth tape tied with 3 different hitches: Cow Hitch, Clove Hitch, and Magnus Hitch; nasal cannula tubing tied with a Clove Hitch (NC); and 6 commercial devices: Comfit™ (Ackrad), Stabiltube™ (B&B Medical), Tube Restraint® (ErgoMed), ETAD™ (Hollister), Thomas ST™ (STI Medical) and Dale® ETT Holder. Methods: A 17cm diameter PVC tube with 14mm "mouth" hole in the side served as a mannequin. 1.25cm synthetic twill was used for cloth tape. ETTs were secured with cloth tape, nasal cannula tubing or devices and subjected to repeated jerks. The jerks were produced by dropping weights a distance of 12 inches, with a cable and pulley system. Three protocols were applied: 2.5 lbs and 12 jerks; 5 lbs and 6 jerks; 10 lbs and 6 jerks. 3 types of failure were identified: slip, stretch and breakage. Failure was defined as movement = 3cm. Results: Among commercial devices, all devices failed consistently either at 2.5 lbs (12 jerks) or 5 lbs (6 jerks), with the sole exception of the Dale®, which consistently passed both tests ($p<0.01$). All devices, including the Dale®, failed at loads = 10lb. Cloth tape never broke: all failures were stretch or slip. Stretch failure was similar for all knots, averaging 5cm at 10 lbs (6 jerks). Isolating out slippage failure, Magnus and Clove produced less average slippage than the Cow, but the differences were not significant. NC produced almost no slip, but unacceptable stretch occurred. Conclusions: Among devices, for dynamic loads =5 lbs, the Dale® was most secure. Cloth tape breaks less easily than all commercial devices tested, but suffers from slippage and stretch. Development of a new cloth tape material, with improved grip and reduced stretch would markedly reduce failure. Nasal cannula tubing has excellent grip but stretches too much to be recommended. There were no significant differences between the knots in this study.

CPAP TREATMENT OF ACUTE CARDIOGENIC PULMONARY EDEMA (ACPE) IN HYPOXEMIC, NON HYPERCAPNIC PATIENTS: A COMPARISON BETWEEN HELMET AND FACE-MASK

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Objective: To compare retrospectively the efficacy of CPAP helmet vs standard face-mask to treat hypoxemic, non-hypercapnic ACPE. Patients and Methods: We analyzed 26 patients with ACPE with P/F<200 and PaCO2<45 mmHg. Patients received standard medical therapy (O2, IV nitrates, diuretics) and high-flow CPAP. They were divided into two groups: Gr1 (13 patients, 6 males; mean age: 79.4±7.3) with helmet and Gr2 (13 patients, 4 males; mean age: 83.8±6.9) with face-mask. Results: In both groups pH, P/F and SAPS II (mean: 47.2±8.9 -Gr1-; 45.2±6.3 -Gr2-) values on admission and after 30, 60 and 180 min were comparable (see table). However, in Gr1 pH improved significantly after 30 min (p=0.014)*, and P/F after 180 min (p=0.039). In Gr2, P/F improved significantly after 60 (p=0.003)** and pH after 60 min (p=0.03). Mean duration of CPAP treatment was significantly greater in the helmet group (389.5±322.9 min) as compared to the facemask (153.1±104.7 min, p=0.019). Mean hospital stay was of 10.9±4.9 and 9.3±5.1 days, mean PEEP was 8.7±1.2 and 8.1±1.2 cmH2O, and mean FIO2 was 0.53±0.1 and 0.45±0.6, in Gr1 and Gr2 respectively. Considering death and AMI as combined end-points of adverse events, Gr1 showed lower, though not statistically significant, relative risk (0.41) of adverse events. Time 0 30' 60' 180' pH values in Gr1 were 7.28±0.06; 7.33±0.07*; 7.39±0.05; 7.41±0.05; and in Gr2 were 7.32±0.13; 7.32±0.12; 7.37±0.10**; 7.40±0.09. *p=0.014 vs T0 in Gr1**p=0.03 vs T0 in Gr2. The time 0 30' 60' 180' P/F in Gr1 were 107.1±25.8; 131±38.8; 215.1±196.9; 209±79.9 §; and in Gr2 were 133.7±56.7; 201.4±85.8 §§; 228.2±78.2; 280±144.5. §p=0.039 vs T0 in Gr1 §§p=0.003 vs T0 in Gr2. Conclusion: Our data suggest that use of a helmet during CPAP treatment in hypoxemic, non-hypercapnic patients with ACPE shows similar clinical results when compared to the face-mask, with the following exceptions: (1) pH increased earlier in Gr1 (2) P/F increased earlier in Gr2 (3) adverse events risk was lower in Gr1. These data require confirmation by a prospective study.

TO DESCRIBE THE CURRENT PRACTICE OF AIRWAY MANAGEMENT IN PATIENTS PRESENTING TO THE ED WITH ACUTE OVERDOSES

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Methods: Prospective, multi-center, standardized data collection of emergency endotracheal intubations in the National Emergency Airway Registry (NEAR). Inclusion criteria: all intubations in which overdose was listed as a primary indication for airway management. Main outcome measure: success rate of various methods of intubation. Secondary outcome measures: medications used to facilitate intubation (especially sedatives), and complication rates. Data analysis: descriptive statistics, and Fisher's exact test. Results: 246 intubation courses were identified in 234 patients. Intubation was ultimately achieved in 232/234 patients for an overall success rate of 99%. 88% were intubated by EM physicians. 188/246 (77%) courses were oral-RSI, 22/246 (9%) other oral routes, 36/246 (14%) were nasal routes. Success rates of intubation course by method: oral RSI; 180/188 (96%), other oral; 16/22 (73%), nasal routes; 32/36(88%)(p=0.001). 207 doses of paralytics were used in oral-RSI courses: succinycholine was used in 160/207 (77%). 168 doses of a sedating agent were used in all courses: in 114/168(68%) etomidate was the agent, in 25/168 (15%) midazolam. Complication rates: oral RSI; 19/188 (10%), other oral; 2/22 (9%), nasal routes; 4/36(11%). Conclusions: Oral RSI is the preferred method of airway management in acute overdose patients. Complication rates are similar for all routes.

POSITIONAL RESTRAINT AND PULMONARY FUNCTION FOLLOWING MAXIMAL EXERTION

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Background: With over 84,000 violent incidents reported in UK National Health Service trusts each year, it is not uncommon for emergency medical staff to encounter violent and agitated individuals. Physical restraint has been associated with the death of individuals often following extreme exertion, with prone body positioning most commonly implicated. Objective: To examine the effects of handcuff restraint and body positioning on pulmonary function, heart rate recovery and lactate recovery in healthy subjects following maximal exercise. Methods: 16 subjects were studied on two occasions at weekly intervals, randomized to sitting upright on a chair unrestrained or lying prone with wrists restrained behind the back with handcuffs. Baseline observations were carried out in these positions, after which they performed maximal exercise on a cycle ergometer and resumed the position for 15 minutes. Primary outcome measures were pulmonary function at 5 and 15 minutes. Results: Maximal exercise was attained on both occasions. At rest there was no significant difference between mean respiratory measurements in the seated position and the prone position. Five minutes following maximal exercise the mean FEV1 in the seated position reduced to 4.6 l/sec and in the prone position to 3.92 l/sec (p=0.006). Similar results were seen at 15 minutes. The FVC also decreased five minutes post exercise to 5.44 l/sec in the seated position and 4.71 l/sec in the prone position (p=0.01). There were no differences in heart rate. Mean whole blood lactate 10 minutes post exercise was 6.63 mmol/l in the seated group and 5.57 mmol/l in the restrained group. This difference was not statistically significant (p=0.19). Conclusions: The prone position with wrists restrained behind the back with handcuffs was associated with a small restrictive ventilatory deficit following maximal exercise. This may contribute to the cardiorespiratory compromise reported in individuals who continue to be combative despite restraint.

USING DIGITAL ECG DEVICES TO MONITOR WEARERS OF BREATHING APPARATUSES DURING FIRE FIGHTING

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Goal: Firemen wearing breathing apparatuses (SCBA) are subjected to physical stress when fighting fires. The suitability of digital ECG tracings for cardiac monitoring during simulated fire fighting drills with SCBA were examined. Method: 43 Firemen, using SCBA (Fire Department Volunteers (n=36); Prof. Fire Fighters (n=7); age 26.9 years; height 180.6 cm; weight 81.4 kg; BMI 25.4 kg/m^2) were selected. All had valid certificates of health (G26/3). Participants had to complete a standardized scenario (average time: 20.3 min) in the Training Center of the State Fire Academy, Baden-Wuerttemberg/ Germany. The protective gear/ SCBA weighed an average of 25 kg. Using an ECG device (Reynolds Medical), the electrical activity (leads II, V1, and V5) of the heart was traced while fire fighting. Amount of QRS complexes, of time actual electrical activity and of time artifacts were registered, ST-changes and cardiac arrhythmias were traced. A consultant interpreted the quality of the digitally recorded ECG tracings. German school grading system (1-6, with 1 being the best) was used to rate the tracings. Results: An average of 4,722 (+/-431) QRS complexes per Fireman were analyzed. Amount of time actual electrical activity was registered averaged 31.4 (+/-4.2) min. An average of 39 (+/-29) seconds of artifact tracing were counted; this corresponds to 2.1% of the total elapsed time. No ST-changes were observed. 6 subjects showed 1-3 ventricular extrasystoles (VES); 4 exhibited sporadic (1-15) supraventricular extrasystoles. One participant showed a bigeminus with 34 VES. None of the electrodes became disconnected during the drill. Quality of tracings was as follows: Grade of 1 (6x); Grade of 2 (30x); Grade of 3 (7x). Average grade of the tracings was 2.1 (good). Conclusion: Tracing the electrical heart activity of fire fighters with digital ECG monitoring is possible. In spite of hard physical work involving intense muscle action, the amount of artifacts on the tracings is negligible.

IS THERE A CORRELATION BETWEEN THYROID FUNCTIONS AND PROGNOSIS IN PATIENTS DIAGNOSED WITH ACUTE MYOCARDIAL INFARCTION IN EMERGENCY DEPARTMENT?

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Aim: In this study we aimed to investigate whether there is a correlation between prognosis and thyroid functions in patients diagnosed acute myocardial infarction (AMI) in emergency department. Material Method: A hundred patients admitted to emergency department with complaint of chest pain and then diagnosed AMI between December 15 2002 - March 15 2003 were included in this study. Serum levels of thyroid-stimulating hormone (TSH), total triiodothyronine (TT3), free triiodothyronine (fT3), total thyroxine (TT4), and free thyroxine were measured from blood samples obtained at the time of admission in emergency department. All patients were hospitalized in coronary intensive care unit and followed up for prognosis. Results: Fourteen patients were died, 86 were discharged. Mean of age was 60.6±11.3 years. Mean level of TT3 level was 134.6±43.1 ng/dL in discharged patients, and 102.5±36.6 ng/dL in dead patients (p=0.01). Mean level of fT3 level was 2.7±2.7 pg/dL in discharged patients, and 2.3±0.4 pg/dL in dead patients (p=0.01). Mean level of TSH level was 1.3±1.1 umIU/mL in discharged patients, and 1.9±1.1 umIU/mL in dead patients (p=0.03). Conclusion: Sick euthyroid syndrome (Low T3) may be the indicator of poor prognosis in AMI.

ACUTE SUPERIOR VENA CAVA SYNDROME: AN (OBLIGATORY MALIGNANT) EMERGENCY?

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SVCS is a rare clinical entity, which nowadays most often presents in patients with thoracic malignancy. Benign causes of SVCS are frequently forgotten in the differential diagnosis. Besides benign intrathoracic tumors and inflammatory/ infectious processes, a group of cardiovascular diseases can cause a SVCS. Dehiscence of a coronary artery inducing a pseudoaneurysm, as in our case, is a very rare cause of SVCS, but potentially lethal if untreated. Case: A 56-year old man was seen at our emergency department for exertion dyspnea since two days. He had a history of an elective replacement of the aortic valve (Björk-Shiley) for severe aortic regurgitation 14 years earlier and he had to be treated with a Bentall reconstruction (inclusion-and-wrap technique) for a ruptured ascending aorta aneurysm six years later. The patient presented with hypoxia, bilateral distended jugular veins, cyanosis and venous engorgement of the head and neck. Pulmonary auscultation was normal. The electrocardiogram revealed an atrial fibrillation with fast ventricular response (143/min). Chest x-ray was remarkable for widening of the mediastinum. Cardiac enzymes were within normal limits. Bedside transthoracic echocardiography and an urgent computerized tomography of the chest revealed a large pseudoaneurysm of the ascending aorta. Transesophageal echocardiography revealed that a dehiscence of the left coronary ostium was the origin of this pseudoaneurysm. Semi-urgent thoracotomy was performed and a dacron graft was used to reanastomose the left coronary artery. The postoperative course was uneventful. Emergency physicians should recognise a superior vena cava syndrome and should be aware that a superior vena cava syndrome can be caused by "benign" cardiovascular causes (thrombosis, aortic dissection, aneurysms, pseudoaneurysms). Some of these pathologies need a quick work-up and an (semi)-urgent surgical intervention.

ANTIPHOSPHOLIPID SYNDROME IN THE ED

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Case: A 31 year old woman went to the ED on 5/11/2002 because of pain and sensation of cold in her left foot; she also complained of paresthesias and functional impairment. On 19/10 she had already gone to the ED because of pain in her left foot: no trauma had occurred and x-ray had shown no fractures; peripheral pulses had not been checked. She had been discharged with the diagnosis of "metatarsalgia". One week later she had been evaluated by an orthopedist as outpatient; he had told her she had a "probable tendinitis" and had prescribed NSAIDs and local infiltrations. In 2001 she had had severe pain, paresthesias and functional impairment from the thumb to the distal part of her right arm (radial side); she had taken NSAIDs for several days and her symptoms had worn off. This problem had occurred twice in that year. In 2000 she had had a spontaneous abortion around the 10th week of gestation. At the moment of the admission she was not taking any drugs (except for NSAIDs for the pain) or oral contraceptives; she had been smoking ten cigarettes a day since 1993. On physical examination her left foot was colder, paler (if compared to the right one) and anterior pedal pulse was not palpable. She was on sinus rhythm and she had not fever. On Doppler color-flow ultrasound no flow could be seen in left anterior tibial artery at the ankle. Therefore the diagnosis of acute peripheral artery occlusion of unknown cause was made, the patient was admitted to the hospital and heparin infusion (plus oral anticoagulant therapy) was immediately started. A cardiac ultrasonographic study showed no abnormalities (such as vegetations, interatrial shunt). CRP, ESR and basal PTT were normal. The test for ANA was positive (1:160) with a uniform pattern whereas antibodies to dsDNA, antibodies to ENA, ANCA and cryoglobulins were absent. HBV and HCV serology was negative. Decreased C3, C4 level was also noted. Inherited and acquired causes of thrombosis (1) such as factor V Leiden, G20210A mutation in the prothrombin gene, hyperhomocysteinemia, folic acid deficiency, vitamin B_{12} deficiency and vitamin B_6 deficiency were absent; the only laboratory abnormality was a moderate anticardiolipin antibody (ACA) level (26,8 MPL) (2). On 7/ 11 physical examination and Doppler color-flow ultrasound of her left foot were normal but the patient complained of pain particularly over the second metatarsus. X-ray showed infraction of the distal part of the second metatarsus which was considered as a "stress fracture". She was discharged on oral anticoagulant therapy (INR 2,5-3). Six weeks later the titer of ACA was still the same. Conclusion: According to the "International consensus statement on preliminary criteria for the classification of the antiphospholipid syndrome" the patient is affected by primary antiphospholipid syndrome (APS). A diagnosis of definite APS requires the presence of at least one of the clinical criteria (vascular thrombosis and complications of pregnancy) and at least one of the laboratory criteria (ACA IgG or IgM present at moderate or high levels in the blood on two or more occasions at least six weeks apart and Lupus anticoagulant antibodies detected in the blood on two or more occasions at least six weeks apart) (3). APS is clearly a heterogeneous disorder, both in terms of its clinical manifestation and range of autoantibodies. Because of the perceived high risk of recurrent thrombosis in APS and the efficacy of oral anticoagulant therapy, accurate diagnosis is a clinical imperative. Diagnosis is dependent on the maintenance of a high index of suspicion and confirmation through laboratory investigation. When arterial or venous thrombosis occurs in patients who do not have obvious major risk factors, or in whom recurrent thrombotic events are a feature, APS should be considered (4).

INTRA-HOSPITAL VITAL EMERGENCY : INVESTIGATION OF MATERIALS AND METHODS IN FIFTEEN MEDICAL AND SURGICAL UNITS OF A FRENCH GENERAL HOSPITAL

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Introduction: In contrast with extra hospital resuscitation, in-hospital emergencies are poor related in the literature. The goal of this study was to evaluate the presence of materials and procedures in all of the medical and surgical services of our hospital, as a basis for future introduction of a global intra-hospital protocol of resuscitation. Methods: We investigate in all medical and surgical units of our hospital the pres-

ence and functionality of emergency carts, the presence of procedures for management of cardiac arrest and vital emergency, and studied the knowledge of both material and procedure by the medical and paramedical staff of each unit. Results: All of the hospital services had an emergency cart except the radiological department. Practicality of the devices was heterogenous, from the most modern to the most dilapidated. Contents of these carts were variables, and servicing was predominantly not realized. Defibrillator was not present in each service, and sometimes not present at the range of one for two services. Absence of material of monitoring (cardioscope, pulse oxymeter) was found in three cases. Only one protocol was found for management of vital emergency with a procedure for calling. For this case, paramedical knowledge of the procedure was superior to medical. Conclusions: Management of vital emergency can't be improvised, and necessities complete emergency carts with an organized servicing, to guaranty rapidity and efficacy of the emergency staff. This preliminary investigation focus of lack of materials and procedure in most of the cases and drive us to propose a standardization of the emergency carts of all the hospital services with a unique procedure for calling and a validated algorithm for cardiac resuscitation and management of vital emergency.

D-DIMER LEVELS USEFULNESS

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Introduction: The plasma D-dimer (DD) measurement is an usual test in the diagnostic strategy of venous thromboembolism disease (VTED). Its interpretation is binary: positive (> 500µg/L) or negative. Is its absolute value useful for the physician? Method: during a prospective multicenter study, we collected clinical data, DD value, diagnosis and 3-month follow-up of outpatients suspected of VTED in the emergency department (ED). Qualitative values have been compared by the Chi-2 test (Yates modified in case of small population). Results: Seven EDs in five countries participated. 198 outpatients were included. The prevalence of VTED was equal to 20%. Sensitivity (Se) was equal to 97% and specificity (Sp) to 42%. The DD specificity in young patient (<60 y) is higher than in old patients (>60 y): 76% vs 29% (p<10-9). In contrary, Se decreased in young population (88% vs 100%, p<10-4). Previous anticoagulant treatment did not affect the quality of DD measurement: Se and Sp were not significantly different. In the aggregate, Sp is better than 85% if the threshold of DD levels is 3500 µg/L. Conclusion: DD measurement is specific in the population younger than 60 years old. Their properties are not modified in case of previous anticoagulant treatment. A DD level higher to 3500 µg/L is specific of VTED.

DIAGNOSTIC STRATEGY OF VENOUS THROMBOEMBOLISM DISEASE RELIABILITY

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Introduction: With regard to a study about the absolute value of plasmatic D-dimer (DD) measurement usefulness, the diagnostic strategy of the venous thromboembolism disease (VTED) was analysed. Method: during a prospective multicenter study, we collected clinical data, DD value, diagnostic management, diagnosis and 3-month follow-up of outpatients suspected of VTED in the emergency department (ED). Results: Seven ED in five countries have been participate. 198 outpatients were included. The prevalence of VTED was equal to 20%. There were 30% of lower-limb venous compression ultrasonography, 23% of helical computed tomography, 20% of cardiac echography, 6% of V/Q scan and only one pulmonary angiography. Outside the DD measurement, 37% of the patients had any other complementary examinations (CE), 49% only one, 10% two and 3% at least three CE. 32% of the negative DD measurement had at least one new CE, and 21% of the positive DD measurement had any other CE. 48% of the patients without VTED at 3-month follow-up don't had any CE to rule out VTED during their hospital stay. 89% of VTED diagnosis were based upon only one CE. Conclusion: Nevertheless the low agreement to literature of diagnostic management of VTED, there was any VTED at the 3-month follow-up. In fact, VTED is just one diagnostic hypothesis amid others. The alternate diagnoses are very important in the management of these patients.

THE ROLE OF THE OBSERVATION UNIT IN THE MANAGEMENT OF SYNCOPE

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At Alessandria and Cuneo Emergency Medicine Departments we evaluated 126 patients from April 2001 to May 2003 who were admitted in Observation Unit (OU) with diagnosis of syncope. Patients admitted presented with unexplained or suspected syncope with at least one of the features listed: suspected or certain heart disease, carotid hypersensitivity, mild or major trauma, recurrent syncope of unknown origin, occupational risk, orthostatic hypotension (by hypovolemia). Patients' clinical features were the following ones: Ratio M/F 72/54; mean age 66 (range 19-92). The average permanence in OU was 23 hours. Admission criteria resulted as following: mild or major trauma in 25% of cases, abnormal ECG 25%, recurrent syncope 14%, history of cardiac disease 11%, murmurs indicative of valvular heart disease in 9%, orthostatic hypotension 9%, syncope without symptoms 2%, carotid-sinus hypersensitivity 2%, permanent pace-maker 2%, occupational risk 1%. More than one of these admission criteria often coexisted in the same patient. The final diagnosis of the 126 patients admitted in OU resulted as following: vasovagal syncope 53 (42%), situational syncope 2 (1.6%), carotid-sinus syncope 9 (7.1%), orthostatic syncope 21 (16.7%), arrhythmia-related syncope 9 (7,1%), syncope by significant structural heart disease 2 (1,6%), non-syncopal attacks 16 (12.8%) and, in conclusion, syncope etiology remained unknown in 14 cases (11.1%). Seventy-seven patients were discharged (61%) while the remaining 49 (39%) required admission for the following reasons: vasovagal syncope with secondary injury in 2 patients (4%), carotid-sinus syncope in 9 patients (18.4 %), orthostatic syncope due to hypovolemia in 9 cases (18.4 %), arrhythmia related syncope in 7 cases (14.3 %), syncope by structural heart disease in 2 cases (4%), non-syncope due to neurological illness in 6 cases (12,3 %). Conclusions: The study concerning patients presenting with syncope at the Observation Unit: It represents a useful alternative to admission in hospital at lower costs. It allows patients to be tested in safe conditions. It reduces the cases of syncope of unknown origin. It increases the percentage of

patients' discharging, with reasonable safetely, after few hours of observation. It allows targeted planning of further investigations.

TREATMENT PATTERNS OF ATRIAL FIBRILLATION AND ATRIAL FLUTTER: DATA FROM THE NATIONAL HOSPITAL AMBULATORY MEDICAL CARE SURVEY

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Objective: The objective of this study was to examine emergency physicians' treatment of patients with atrial fibrillation or atrial flutter. Methods: Data analyzed in this study were from the National Hospital Ambulatory Medical Care Survey. Patient selection was based on ICD-9-CM codes. Results: An estimated 1.8 million patients diagnosed with atrial fibrillation or atrial flutter in US Emergency Departments (EDs) accounted for 0.5% of US ED visits during 1997-2000. In this group, 55% were female, 85% were Caucasian, and the mean age was 72 ± 14 years. Many patients with atrial fibrillation or flutter complained of chest pain or shortness of breath (44%). The most frequently administered individual medications were diltiazem (22%), digoxin (17%), furosemide (16%), warfarin (9%), and heparin (8%). Patients were most often treated with calcium channel blockers (35%), cardiac glycosides (26%), and pain medications (22%). Overall, an antidysrrhythmic agent was given to 77% of patients; 4% received adenosine. Two-thirds of patients were hospitalized, with 15% being admitted to the ICU or CCU. Patients receiving a beta blocker were less likely to be admitted (47% vs 69%, OR = 0.4, p = 0.02). Conclusions: Most patients who presented to the ED with atrial fibrillation or atrial flutter were older and complained of chest pain or shortness of breath. Most patients received an antidysrrhythmic, and a few received adenosine despite the fact it is not indicated for use in atrial fibrillation or atrial flutter. Patients who received a beta blocker were less likely to be admitted.

VENTRICULAR TACHYCARDIA SECONDARY TO POISONING FOR COCAINE: IS AMIODARONE ALSO USEFUL?

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Introduction: The treatment of the secondary arrhythmias due to poisoning from drugs has taken a role of relevant importance in the recent guides of the American Heart Association (AHA) in the year 2000. Nonetheless the treatment of the ventricular arrhythmias secondary to the poisoning for cocaine lacks specific treatments. Objective: To analyze the importance of the treatment with amiodarone of the ventricular arrhythmias induced by cocaine. The physiopathological implications are also analyzed from the cocaine to cardiovascular level and the importance that has the fact of consuming cocaine and alcohol of form combining. Methods: There is described the case of a 32-year-old patient male, who in the first moment denies ingestion of toxic substances, affection of a ventricular tachycardia secondary to poisoning by cocaine and that received treatment with amiodarone of successful form. The patient received treatment for tachycardia of broad QRS according to protocol AHA 2000. The series of ventricular tachycardia stopped, presented in the moment of the hospitable admission a sinus rhythm with ventricular extrasystoles isolated. Conclusion: In this case in spite of not being the amiodarone the drug of election for the ventricular tachycardias secondary to poisoning for cocaine, an ideal result was obtained.

THE EFFECT OF WORKING NIGHTS ON MISSED DIAGNOSIS AMONG PATIENTS WITH ACUTE CARDIAC ISCHEMIA IN THE EMERGENCY DEPARTMENT

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Introduction: Federal guidelines have proposed work-hour limitations of resident physicians in the emergency department (ED) to avoid medical errors from sleep deprivation. We evaluated the effect of working nights on missed diagnosis of acute cardiac ischemia (ACI) in the ED. Methods: We performed a secondary analysis of the database from the Acute Cardiac Ischemia Time-Insensitive Predictive Instrument (ACI-TIPI) trial. In 1993, this multicenter study enrolled 10,689 patients who were > 30 years old, with symptoms suggestive of acute cardiac ischemia. Patients with ACI were defined as those with a final diagnosis of acute myocardial infarction or unstable angina. We analyzed demographic and clinical data on the 1855 patients with ACI compared to the 8804 patients without ACI. Thirty patients left AMA and were not included in the analysis. We defined missed diagnosis as failure to admit patients with ACI and defined nightshift as 7PM through 6:59 AM. Results: A greater percentage of patients had ACI during the nightshift (20%) than the dayshift (16%), even though more total patients with ACI were seen during the dayshift. Among patients with ACI, those evaluated during the nightshift, were more likely to be white and > 65 years old and to have a chief complaint of shortness of breath, rales on exam, a history of myocardial infarction and congestive heart failure on chest xray, and to be taking beta-blockers, ACE inhibitors, nitrates or nitroglycerin, and arrived by ambulance. Fewer patients with ACI evaluated during the nightshift (1.3%, 9/709) compared to the dayshift (2.8%, 32/1140) were inappropriately discharged home. Working the nightshift was not associated with an increased odds of discharging patients with ACI, after adjusting for age, gender, nonwhite race, and TIPI Score (Odds Ratio 0.5, 95% CI .2,1.0). Conclusion: Contrary to our hypothesis, working the nightshift was not associated with increased odds of inappropriately discharging patients with ACI.

CIRCADIAN RHYTHM IN PATIENTS WITH ACUTE MYOCARDIAL INFARCT

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Introduction: To find out if there is a typical circadian pattern of acute myocardial infarct in the local cohort of population and their characteristics. Method: A retrospective study was conducted after tracing the all the records of patients who presented to the Emergency Department of an urban tertiary

hospital with a final discharge diagnosis of acute myocardial infarct (AMI) between the period of January to June 2002 Results: Two hundred and fifty-two patients were studied. The second quarter of the day was the peak period for onset of symptoms (23.0%), namely chest pain and it was also the period where most severe symptoms were experienced (36.1%). In general there was a delay of 5.1 +/- 48 hours before patients presented to the Emergency Department. The majority of these patients with acute myocardial infarct presented in the third quarter of the day (34.9%). Conclusion: Acute myocardial infarct in the local population demonstrates a trend whose onset peaks in the second quarter of the day. This corresponds to the hours of arising and resuming daily activities.

PATIENTS WITH ACUTE MYOCARDIAL INFARCTION: FACTORS ASSOCIATED WITH EARLY REPERFUSION THERAPY

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Objective: To describe the demographic profile of patients with acute myocardial infarction (AMI) and identify factors associated with early reperfusion therapy. Materials & Methods: Patients presenting with signs and symptoms of acute myocardial infarction at the emergency departments (ED) of five hospitals in Singapore were interviewed at the ED~{!/~}s with a structured questionnaire over a period of two months. Further information was obtained from inpatient records. Results: Out of 175 patients who were recruited with an admission diagnosis of AMI, 94% were discharged with a final diagnosis of AMI. 75% were male. The mean age was 62 years. Most had primary or no education and lived in government flats. 71% of subjects presented with central or left-sided chest pain. Median time from worst chest pain to arrival in hospital was 1.8+8.7 hours. Median time from arrival at hospital to first electrocardiogram and attendance by the doctor were 6+18 minutes and 6+26 minutes, respectively. 41% of patients who arrived within 12 hours of their worst chest pain received thrombolytics. Median door-to-needle time was 1.2+0.8 hours. Median time from worst chest pain to thrombolysis was 3.0+2.1 hours. 15% of patients who came within 12 hours of their worst chest pain had primary percutaneous transluminal coronary angioplasty (PTCA). Median door-to-PTCA time was 2.3+0.9 hours and median time from the worst chest pain to primary PTCA was 4.4+2.3 hours. Factors associated with a greater likelihood of receiving either thrombolytics or primary PTCA were: male sex (47%), younger than 60 years old (53%), secondary or tertiary education (65%) and typical chest pain (45%). Patients who received reperfusion therapy were less likely to have early cardiac deaths and acute pulmonary oedema during their index admissions to hospital. Conclusion: There was considerable pre-hospital and in-hospital delay in delivering early reperfusion therapy to patients with AMI.

UTILITY OF EARLY DOSAGE OF BNP, BY RAPID B-TYPE NATRIURETIC PEPTIDE (BNP) ASSAY, IN PATIENTS PRESENTING TO THE EMERGENCY DEPARTMENT

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Methods: In this study, we assess whether BNP levels drawn early in patients presenting with dyspnea to the Emergency Department (ED), could be useful for the clinician in the first steps of differential diagnosis. BNP levels were obtained in 92 consecutive patients presenting to the ED with acute dyspnea. Initially, clinicians were asked to assign, on the basis of the patient's medical history and physical examination only, every patient into one of the following groups of diagnoses: 1) Congestive Heart Failure (CHF), 2) pulmonary disease, 3) pulmonary embolism. Then, BNP measurements and instrumental analysis were performed to complete the diagnostic tier. BNP was measured by using the Triage BNP (Biosite Diagnostics Inc.). Clinicians were blinded to BNP levels and asked to give their final diagnosis for every patient. For the statistical analysis we evaluated the Positive Predictive Value (PPV) and the Negative Predictive Value (NPV) for every group of final diagnosis. A receiver-operating-characteristic-curve (ROC curve) was created to show the sensitivity and specificity of BNP measurements. Results: Comparison of mean BNP concentrations among the three groups of final diagnosis indicated, as described in literature, that the group of CHF had a mean BNP concentration significantly different from the group with pulmonary diseases (803.7 and 249.54 pg/mL respectively, p<0,001) but not from the group with pulmonary embolism (505.74 pg/mL, p=0.132). Only in the group of CHF patients was the ROC curve significant, with a NPV of 100% and 97% at a BNP cutoff of 50 pg/mL and 150 pg/ml respectively and PPV of 70% with BNP cutoff of 1000 pg/mL. Early determination of BNP could be useful for the clinician in differential diagnosis of dyspnea in the ED. In particular, in patients presenting with dyspnea, a low concentration of BNP can reasonably rule out CHF, whereas a very high concentration of this peptide clearly supports the diagnosis of CHF but does not exclude the presence of other processes contributing to dyspnea.

MASSIVE HAEMORRHAGE FROM A SURRENAL ADENOMA IN A PATIENT TREATED WITH LOW-MOLECULAR-WEIGHT HEPARINE FOR AN UNSTABLE CORONARY SYNDROME.

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Haemorrhage is a well known and feared complication in anticoagulation therapy. We describe an unusual case. An 81-year-old male was admitted at the Emergency Department with persistent retrosternal pain for some hours. Sublingual nitrate didn't help. Anterior ischemia was proven on the ECG and he was treated with low-molecular-weight heparin (LMWH) (5700 IU intravenous (IV)and 5700 IU subcutane-

ous), an IV nitrate drip and 450 mg salicylic acid IV. A few hours later he complained of left flank pain and his hemodynamic parameters became unstable. An urgent bedside ultrasound revealed a massive haemorrhage in the left hemiabdomen. Lab examination revealed a haemoglobin drop from 13.8 to 7.6 g/dl with a normal trombocythemia. The patient collapsed before further diagnosis could be done and an urgent laparatomy was performed. A massive, left-sided retroperitoneal hematoma was found with origin at the left renal area. A nefrectomy was performed and closer examination of the resected specimen revealed the surrenal origin of the bleeding. Anatomopathological examination confirmed a haemorrhage from an adenoma of the left adrenal gland. Postoperative course was difficult and the patient died of progressive respiratory insufficiency. Surrenal haemorrhages are rather rare. They're seen in septicaemia, haemorrhagic diathesis, mechanical injury, pregnancy, stress and anticoagulation. Heparin (classic or LMW) induced surrenal haemorrhage is usually associated with heparin induced trombocytopenia. Trombocyte level in our patient however was normal. His massive bleeding probably resulted from a combination of hypervascularisation of the adenoma, a stress induced rise in adrenal blood flow, age related vascular fragility and the effects of the LMWH. Even rare, surrenal bleeding should be included in the differential diagnosis of acute flank pain in heparinised patients as it can be.

THE SURVIVAL RATE AT 7 DAYS AFTER CARDIO-RESPIRATORY AND CEREBRAL RESUSCITATION IN THE NORTH-EASTERN ROMANIA

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Purpose of the study: The first and after 7 days assessment of the success of cardio-respiratory resuscitation and the neurological recuperation in patients of cardio-respiratory arrest,the detection of the specific features of the post-resuscitation therapy in a new Emergency Department(ED),created in July 2000 in a University Center of the north-easter Romania and to prove the difference between the resuscitation rate before and after the ED seting up.Material and Method:There have been investigated 83 patients having cardio-respiratory arrest either in or out of hospital.They received cardio-respiratory and cerebral resuscitation within the ED of the "Sf.Spiridon"Hospital in Iasi, between July,1,2002 and July,1,2003 (two year after the ED was created and 98% of staff received a specific training in emergency medicine).We studied the survival rate imediat and after 7 days of post-resuscitation therapy and compared this with the previous resuscitation rate, existing in the triage room.Results:The success rate for CPR was 40.9% (34 pts)-20 time more than between July 1999-July 2000-and the survival rate after 7 days was 15.6%,and 12% had a complete neurological recuperation.The resuscitated patients'age was 57, with the male/female ratio of 1/1.For 2.4% of the cases, thrombolysis has been performed during CPR (with a success rate of 50%) and post-resuscitation targeted another 2.4% (the survival rate with neurological recuperation was 100%).The resuscitated patients needed an average of 63 hours of mechanical ventilation.Conclusions:The cardio-respiratory resuscitation within the ED provides a success rate of 40.9%,presenting both a significant neurological recuperation and interval survival.The post-resuscitation thrombolysis and well-directed techniques of intensive therapy, including the mechanical ventilation support contributes to the success of the post-resuscitation therapy.All of these prove that the ED and the training of the staff have been a necessity.

A MODIFIED APPROACH TO SUPRACLAVICULAR SUBCLAVIAN VEIN CATHETER PLACEMENT: THE ER POCKET APPROACH

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Study objective: To examine the feasibility of central venous catheter placement utilizing the supraclavicular landmarks for subclavian vein access. Methods: In the first portion of this study, central venous catheter cannulation was performed in 28 cadavers utilizing a specified set of landmarks via the technique that we call the "pocket approach. The second portion of the study was a retrospective chart review of 75 emergency department (ED) patients who had subclavian vein catheter placement attempted utilizing supraclavicular landmarks by the "pocket approach". The success of subclavian line placement, the incidence of pneumothorax, and the use of supraclavicular subclavian access in the setting of trauma, CPR, or with the presence of a cervical collar (C-collar) were assessed. Results: The success rate for placement in 28 cadavers was 100% (34/34; 95% CI 90% to 100%) using the "pocket approach" landmarks. There were no complications. Chart review of 75 patients revealed a success rate for supraclavicular central line placement in this study of 88% (66/75; 95% CI 78% to 94%). No pneumothorax occurred (0/75; 95% CI 0% to 5%). This technique was used successfully in 12/12 (100%, 95% CI 74% to 100%) patients with cervical collars in place and in 17/18 (94%, 95% CI 73% to 99%) patients with CPR in progress. Conclusion: Based on our data gathered from a retrospective chart review, the supraclavicular "pocket approach" to subclavian vein cannulation may be a useful and safe method of central venous access.

IMMEDIATE DIAGNOSIS OF AORTIC DISSECTION: A RETROSPECTIVE STUDY AND REVIEW OF THE LITERATURE

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Aortic dissection is a life-threatening cardiovascular emergency requiring immediate diagnosis and treatment. The incidence of aortic dissection ranges from 5 to 30 cases per million people per year. The main challenge in managing acute aortic dissection is to suspect and thus diagnose the disease as early as possible. Aortic dissection has a wide range of clinical presentation. Although the disease is uncommon, its outcome is frequently fatal, and many patients with aortic dissection die before presentation to the hospital or prior to diagnosis. In this study we aim to review the complaint of patients, diagnostic procedures, treatment and clinical manifestations and prognosis retrospectively in 34 patients admitted to emergency department and diagnosed aortic dissection between March 2001 and March 2003.

DILATED MYOCARDIOPATHY AND HAEMOREOLOGIC BALANCE

Forte P, Mazzone M, Portale G, Buccelletti F, La Sala M, Testa A, Covino M, Pignataro G, Travaglino F, Mirabella C, Bellocci F, Ierardi C, Biasucci L, Crea F, Gentiloni Silveri N

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Introduction: Patients with heart failure present high d-dimer levels compared with patients having ischemic cardiopathy without decompensation. In order to test the hypothesis that a prothrombotic state is related to this pathology and to its severity, hemostasis activation markers have been tested, in particular platelet function, thrombin activity and fibrinolysis. Aims: Relation between d-dimers levels and cardiac disease (dilated cardiomyopathy). Relation between d-dimers and ejection fraction and NYHA classification. Relation between and follow-up (as length of stay and mortality) Material and methods: We recruited 11 patients (5 males and 6 females), mean age 69 +/- 14 years, with acute heart failure, came into ED from March to May 2003. Inclusions criteria were: different etiology DCM diagnosis (idiopathic, post-ischemic, post–myocarditis, toxic, drug related); left or right acute heart failure signs; EF < 35%. Exclusion criteria: Haematologic patients; Neoplastic patients; Patients under heparin therapy; Patients with atrial fibrillation; Patients undergone invasive procedures (ETI, central venous and arterial devices); Seven patients with post-ischemic DCM, two patients with cocaine related DCM, one patient with drug related (antracycline) DCM and one patients with post-myocarditis were included. Venous blood samples for basic chemical exams, blood cell count, haemocoagulative function and d-dimer were collected. X-ray chest, ECG and Echocardiogram were performed. Results: Echocardiogram showed a mean EF of 25% +/- 8.8 Cardiac cytonecrosis markers resulted high in patients with diagnosis of ischemic cardiopathy with angor or dispnea symptoms; chest radiography evidenced an cardiomediastinic shape enlargement. Haemocoaugulative tests didn't show PT, aPTT and INR lengthening. The mean d-dimer values resulted to be 2018,5 +/- 1475 ng/ml. It was related whether with the cardiac decompensation NYHA classification, or the EF reduction reported by the echocardiogram. Conclusion: Many studies conclude that cardiac cavities dilatation is the cause of the venous stasis and of the build up of thrombi in the venous system too; this process is mostly true in patients with low cardiac output: in fact, the stasis could play an important role in modifying the haemoreologic balance. Moreover it could be related with the sympathetic activity increase, usually present in other pathologic conditions such as myocardial infarction and mitral valve prolapse.

RISK FACTORS FOR PULMONARY EMBOLISM AND TROPONIN I SERUM LEVELS IN ACUTE PHASE OF THE DISEASE

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Troponin I (cTnI) is a specific and sensitive marker of myocardial damage. A percentage of 30% to 40% of subjects suffering from pulmonary embolism (EP) presents an increase in serum levels of cTnI. High serum levels of cTnI in the acute phase of EP are considered a negative prognostic factor quoad vitam (Circulation 2000; BMJ 2003). The aim of this study is to identify a possible relationship between the risk factors for EP and the increase of serum levels of cTnI in acute phase of the disease. Seventy-two patients (M/F ratio 17:55; mean age 65.4±17.9 yrs) with submassive EP (Eur Heart J, 2000), admitted to the Emergency Medicine Ward of the "A. Cardarelli" Hospital in Naples from 01/07/2002 to 30/06/2003 were studied. The clinical probability of EP was evaluated using the Wicki score (Arch Intern Med, 2001). The evaluation of cTnI levels was carried out in all of the patients with a low probability and serum levels of D-dimer >500 mg/L, as well as in those presenting with a medium or high probability of EP, within 8 hours from the appearance of the symptoms. The diagnosis of EP was confirmed using spiral Computed Tomography angiography (sCT). Only patients with central EP (intraluminal defectus in the main or segmental pulmonary arteries; sensitivity and specificity of the sCT>94%) were included in the study. The mean age of patients with EP and plasmatic levels of cTnI >0.1 mg/L is significantly higher to that of patients with EP and plasmatic levels of cTnI <0.1 mg/L (70,6±14,4 vs 61,7±19,1 yrs; p = 0.034). The amnestic findings of diabetes mellitus (RR = 12,6 95%CI = 2,6-61,2) and previous EP/deep vein thrombosis (TVP) (RR = 11,3 95%CI = 3,2-39,7) are significantly associated with plasmatic levels of cTnI >0.1 mg/L. Our data indicate that old age and positive anamnesis for diabetes mellitus and previous EP/TVP are associated with an increase in the serum levels of cTnI in the acute phases of EP.

RISK FACTORS IN ACUTE CORONARY SYNDROME

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Objectives: Analyze some of the risk factors in Acute Coronary Syndrome both, individually and associated between them. Methods: A retrospective study of 100 clinical histories was made. Only histories with an Acute Myocardial Infarction as a main diagnosis were revised. These histories corresponded to patients who came to the Emergency Room of our hospital in the last 18 months and were revised for the possible risk factors such as: age, Cholesterol levels, active smoking, Diabetes Mellitus type 1 (DMt1) and Hypertension. Results: The average age of the patients was 70+/- 5 years old, being 72% male and 28% female. Just 1% did not present any of the risk factors, 46% presented a single risk factor, 53% presented 2 or more of these factors associated (of which 18% had three or more risk factors). Individually and by order of frequency we found the following data: 53% of the patients suffered hypertension, 46% dyslipemia, 42% were active smokers, 12% dyslipemia and active smoking habit, 10% dyslipemia and hypertension, 7% hypertension and DMt1, 7% hypertension and active smoking habit, 3% dyslipemia and DMt1. Conclusion: There is a clear association between the risk factors studied and Acute Coronary Syndrome. Simple questions about these risk factors during a basic anamnesis made by the doctor in charge of the triage at the door of the Emergency Room may allow a faster and more efficient evaluation of the potential risk of patients.

BIPHASIC SHOCK WAVEFORM FOR CARDIOVERSION OF ATRIAL FIBRILLATION IN THE EMERGENCY DEPARTMENT

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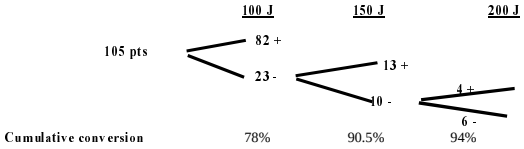
Introduction: Transthoracic cardioversion, traditionally using monophasic shocks, has an important role in the treatment of Atrial Fibrillation (AF). Biphasic shock waveform has been demonstrated to be more successful than monophasic waveform for termination of ventricular fibrillation, but data about its use for cardioversion of AF are limited. Aim of our study was to evaluate efficacy and safety of biphasic shocks for conversion of AF to sinus rhythm in the Emergency Department (E.D). Methods: 105 consecutive patients (pts), (mean age 65±12 years, 63 men), who came to the E.D because of AF, were our study population; AF duration was less than 48 hours in 73 pts (70%). Cardioversion was performed using biphasic truncated exponential waveform shocks; the pts received up to 3 shocks, as necessary for conversion, with gradual increment of energy dose: 100 J, 150 J and 200 J. Results: (+ = converted, - = not converted):



After cardioversion asystole up to 5 sec. was observed in 1 pt and pulmonary edema in another pt: in both pts 200 J were delivered; no skin burns were noted. Conclusions: biphasic shock waveform for Cardioversion of AF is safe and effective; we advice to deliver an energy of 150 J for the first shock.

RISK FACTORS PREDICTING RETURN TO THE EMERGENCY DEPARTMENT BY PATIENTS USING THE EMERGENCY DEPARTMENT OF THE MONTRÉAL HEART INSTITUTE

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Objectives: Examine the factors predicting risk of return to the ED in a tertiary centre specialized in cardiology. Methods: Between October 2000 and March 2001, we selected one out of 14 files of patients visiting the ED. Data on departure diagnosis (ICD-9), co-morbidities (ICD-9), medications reported, occurrence of a hospitalization or a return to ED up to 3 months after were retrieved. ICD-9 diagnoses were regrouped into heart failure, fibrillation/auricular flutter, other arrhythmia, valve problems, atherosclerotic heart disease, other cardiovascular problems, non-coronary retrosternal pain and other (non-cardiac). Number of medications reported as taken at the time of the visit or prescribed on discharge was calculated. Up to 11 comorbidities were abstracted in addition to the primary diagnosis. Using multiple logistic regression analysis, relationship between principal diagnosis (comparison was other, non-cardiac), number of medications and the likelihood of ED revisit was analysed controlling for age and gender. Results: A sample of 468 visits was obtained. Average age of patients was 63 years (SD=15); 44% were women. Patients had an average of 1.3 comorbidities (SD=1.2) and 5.2 medications (SD=3.5) were recorded in the files. Probability to return to the ED within 3 months was independently associated with number of medications (95% CI 1.02-1.20), certain departure diagnoses (heart failure 1.57-10.98, atherosclerotic heart disease 1.05-3.46, arrhythmia 1.08-4.05 and other cardiovascular 1.01-4.62), and number of comorbidities (1.00-1.54). Conclusions: Patients with multiple medications can be targeted for interventions to reduce their risk of ED return.

HOW TO IMPROVE EMERGENCY DEPARTMENT (ED) EFFECTIVENESS FROM ED OCCUPANCY ANALYSIS

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Objective: It seems obvious that Emergency Department (ED) overcrowding is linked to deterioration in effectiveness, but it is difficult to demonstrate this scientifically. The aim of this study was to define effectiveness, to study reasons for patients' continued stay in the ED, and to establish the level of relationship between both of them. Methods: For 3 consecutive weeks, we recorded at 3-hour intervals the number of arrivals, the number of patients waiting to be seen, the waiting time (the mean of waiting time of the three patients waiting for longer) and the number of patients placed in ED as well as the reason for their continued stay. These reasons were divided into: A) ED related factors: A1-waiting for a physician, A2-being seen, A3-waiting for test results, A4-waiting for outcome; B) Hospital (H) related factors: B1-waiting for an assigned bed (bed should be available but is still occupied) , B2-waiting for a bed (lack of bed at that specific 3-hour interval); C) ED-H-interrelation related factors: C1- waiting for a test performed out of ED, C2- waiting for a specialist; D) non-ED-non-H related factors: D1- waiting for an ambulance, D2-waiting for relatives, D3- waiting for social worker intervention. ED occupancy rate (OR) was calculated as a rate between the number of patients placed in the ED and the number of boxes. Percentage of OR due to each reason was calculated as well. Two effectiveness markers were defined: E1 (arrivals/waiting time) and E2 (arrivals/patients waiting). Results: Many factors had a significant correlation with both effectiveness markers. However, when a multivariate regression analysis was performed, a nice correlation was only found between effectiveness markers and percentage of OR due to hospital itself (E1: $r=0.38$, $p<0.001$; E2: $r=0.34$, $p<0.001$). Specifically, OR due to patients waiting for an assigned bed (assigned bed is still occupied) (E1: $r=0.44$, $p<0.001$; E2: $r=0.40$, $p<0.001$). Conclusions: The more OR increases, the more ED effectiveness decreases. In this study, OR increase is mostly due to inappropriate hospital behaviors (such as the fact that hospital inpatients are discharged too late within evening hours). Other reasons, such as patient arrivals, frequently used to justify ED overcrowding are not significant. These results should be used for hospital administration as a tool for changing some hospital behaviors that lead to ED effectiveness deterioration.

THE USE OF PRIMARY PREVENTION AMONG PATIENTS PRESENTING WITH STROKE IN A ROMANIAN EMERGENCY DEPARTMENT

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Objectives: To determine what percentage of patients who presented to our Emergency Department, with a confirmed stroke and a prior history of hypertension (HBP) or atrial fibrillation (AF) were being treated with either antihypertensive or anticoagulant medications prior to the event. Methods: We conducted a retrospective chart review over a one year period (July 1, 2002 – June 31, 2003) of all patients with the confirmed diagnosis of ischemic stroke, hemorrhagic stroke or transient ischemic attack in E.D. of Targu Mures, Romania. Charts were reviewed for: demographic information, age, sex, type of stroke, history of HBP/AF/ heart diseases/diabetes, patients' medication and outcome. Results: From 24,062 visits to our emergency department, 599 patients met inclusion criteria: ischemic stroke 373 (62%), intraparenchymal hemorrhage 162 (27%), subarachnoid hemorrhage 12 (2%) and 51 (8.5%) cases of transient ischemic attack. Of these patients 363 (60%) had HBP and 84 (14%) AF. 237 (56%) had been prescribed treatment but only 171 (72%) were taking it; and just 22 (13%) took aspirin and 5 (3%) warfarin. 182 (43%) patients had no treatment before the event and in 180 cases we didn't have information about medication. Conclusions: HBP and AF are important risk factors for stokes. In this group of patients the risk is even higher because the medications which mitigate it are very underutilized, and the patients were not adherent to treatment. Future treatment protocols must be implemented in our area in order to reduce the high risk our patients with HBP and AF are exposed to by lack of proper treatment.

A PRELIMINARY STUDY: VALIDITY TESTING OF LIKELIHOOD CLASSIFICATION IN PATIENTS WITH UNSTABLE ANGINA WITH REGARD TO THE ANGIOGRAPHIC RESULTS

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Objectives: According to accepted guidelines worldwide (AHA-ACC/UAP), the likelihood of acute ischemia caused by coronary artery disease (CAD) is to be determined as high, intermediate, or low for all patients presenting with chest discomfort (level of evidence C). This study was conducted to estimate the extent of coronary artery lesions in patients with unstable angina (UAP) in the emergency department (ED) and establish triage criteria for the UAP patients by using the likelihood classification. Methods: Consecutive patients with suspected UAP were enrolled in this study. Patients were triaged as high or intermediate likelihood prior to coronary angiography (CAG). Patients' presenting symptoms, ECGs, troponin levels, history and risk factors of CAD and the patients' likelihood classes as high or intermediate in the ED were analyzed. Results: In patients with high likelihood (n=89), CAG revealed that 62 had severe CAD (> 70% stenosis in at least one major epicardial vessels or > 50% stenosis of the left main coronary artery), 7 moderate CAD (> 50% stenosis but < 70% in at least one major epicardial vessels), 20 mild CAD (< 50% in at least one major epicardial vessels) or normal CAG. In patients with intermediate likelihood (n=19), CAG revealed that 2 severe CAD, and 17 mild CAD or normal CAG. The rate of severe CAD was significantly higher in patients with high likelihood (p=0.000). The sensitivity of the likelihood classification for detecting severe CAD was 97.1%, specificity was 45.9%, positive predictive value was 77.5%, negative predictive value was 89.4% and accuracy was 79.6%. Conclusions: The likelihood classification is useful for the triage of the UAP patients. Intermediate likelihood patients should be admitted for observation and should undergo noninvasive stress tests after initial stabilization. High likelihood patients should be admitted to CCU and screened with CAG. Further studies are warranted to validate the classification in the triage of UAP patients.

ANALYSIS OF THE TRAUMATIC CARDIAC ARREST IN BISCAY

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Introduction: Traumatic cardiac arrest (TCA) is characterized by very poor prognosis in spite of suitable maneuvers of cardio-pulmonary resuscitation (CPR). In the province of Biscay there exists 4 teams of emergency (TE) in ICU-mobile that give assistance to 1.140.026 inhabitants. Objectives: To analyze the survival of TCA patients in the province of Biscay during the period between January of 1999 and January of 2003. Methods: Retrospective study of all the TCA patients in Biscay who were attended by Osakidetza's TE. Results: There were 371 patients who suffered TCA, of whom 74,12% were men. The middle ages were 44,33 years old (s21,82). The day of the week that most TCAs were registered was Monday. Etiology was predominantly due to the traffic accidents with 217cases. Accidents to pedestrians accounted for 66. The intention was accidental in 288, suicidal in 74, and 9 had their origin in an aggression. The initial rhythm was predominantly asystole with 317 (85,44%) cases, 45 (12,12%) pulseless electrical activity (PEA) and 9 (2,42%) with ventricular fibrillation. Of the 371 TCA studied, 245 (66,03%) were not begun by TE. In the rest 126 (33,96%) CPR was done by TE, of which a total of 85 were considered dead at scene, 26 died during transfer, and 14 died in hospital (11 of them in the first hour and 3 in the first 24 hours). Survival was limited to one case (0,26%). Conclusions: Victims of traumatic cardiac arrest rarely survive outside the hospital. The prognosis of the TCA is slightly encouraging. Continuing investigation is essential for modification of consensus guidelines of performance.

DOUBLE HEPATIC LACERATION AFTER CARDIOPULMONARY RESUSCITATION

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Introduction: Cardiopulmonary resuscitation(CPR) can cause damage to abdominal organs, including trauma injury

to the liver, although recorded cases are rare. Nevertheless, we know a secondary series of complications from chest compressions such as rib fractures, liver, ,splenic, gastric or cardiac injury may occur. Liver laceration is, however, infrequent. Clinic Case: We expose the case of a 52 year-old patient who received CPR from a person who witnessed the incident and subsequently from an emergency team. In the necropsy study a double liver laceration was found that caused a hemoperitoneum of 450 ml. The origin of the sudden death was acute coronary thrombosis. Results: We carried out a bibliographical research in the major data base OVID from 1966 to 2002 without finding an article related to this type of injury.The most frequent complications are fractures that occur in the 25-50% of the patients. The liver trauma in the form of hemathoma or laceration has an incidence of the 2.9% in the autopsies carried out in the patients that have been submitted to maneuvers of CPR. Conclusions: It is very important that techniques of CPR be correct to avoid traumatic complications. The possibility of visceral injury due to CPR should be considered in cases of hypovolemic shock of unknown etiology or prolonged pulseless electrical activity without pulse prolonged in patients that have been submitted previously to maneuvers of CPR.

CARDIAC ARREST IN THE EMERGENCY ROOM

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Aim of our study was to evaluate:(a) the knowledge of external out-hospital emergency systems (OHESs) in the general population;(b) dispatch ability of OHESs; (c)OHESs ability in managing cardiac arrest (CAs) in their districts;(d) the ability of Emergency rooms (ERs) to support OHESs and manage CAs. We studied non-traumatic cardiac arrest in patients who come in ERs in Cagliari (Italy) during 1 year (2002). In this period 90000 subjects come in these ERs; we observed 47 cardiac arrests: in 11 cases no cardiac and pulmonary resuscitation technique was applied (patients already dead) while in 36 patients (nine not suffering from any cardiac disease) it was. Survival percentage on leaving ER was 16.6% (16/36). Among survivors, one is still live with no complication, three patients died within 24 h and in the first week: 1-year survival percentage was 1.7%. Obviously people working in ERs may observe only a little number of patients with arrest cardiac: the small number of patients and the needing of a speed care impose a continuous training of people operating both in ERs and in OHESs.

THE SURVIVAL RATE AT 7 DAYS AFTER CARDIO-RESPIRATORY AND CEREBRAL RESUSCITATION IN NORTHEASTERN ROMANIA

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Objective: The first and after 7 days assessment of the success of cardio-respiratory resuscitation and the neurological recuperation in patients of cardio-respiratory arrest, the detection of the specific features of the post-resuscitation therapy in a new Emergency Department (ED), created in July 2000 in a University Center of the northeastern Romania and to prove the difference between the resuscitation rate before and after the ED setting up. Methods: There have been investigated 83 patients having cardio-respiratory arrest either in or out of hospital. They received cardio-respiratory and cerebral resuscitation within the ED of the "Sf. Spiridon"Hospital in Iasi, between July 1, 2002 and July 1, 2003 (two year after the ED was created and 98% of staff received a specific training in emergency medicine). We studied the survival rate immediately and after 7 days of post-resuscitation therapy and compared this with the previous resuscitation rate, existing in the triage room. Results: The success rate for CPR was 40.9% (34 pts)-20 times more than between July 1999-July 2000-and the survival rate after 7 days was 15.6%, and 12% had a complete neurological recuperation. The resuscitated patients' age was 57, with the male/female ratio of 1/1. For 2.4% of the cases, thrombolysis has been performed during CPR (with a success rate of 50%) and post-resuscitation targeted another 2.4% (the survival rate with neurological recuperation was 100%). The resuscitated patients needed an average of 63 hours of mechanical ventilation. Conclusions: The cardio-respiratory resuscitation within the ED provides a success rate of 40.9%, presenting both a significant neurological recuperation and interval survival. The post-resuscitation thrombolysis and well-directed techniques of intensive therapy, including the mechanical ventilation support contributes to the success of the post-resuscitation therapy. All of these prove that the ED and the training of the staff have been a necessity.

ELECTROCARDIOGRAPHIC PARTICULARITIES IN PATIENTS WITH HYPOTHERMIA

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Purpose of the study: Evaluation of the rhythm disorders and of the electrocardiographic (ecg) changes incurred with hypothermic patients and establishing the relationships between these and the degree of the hypothermia and between the ecg aspect in progress and the vital prognosis.Material and method:There were examined the cases admitted in Emergency Department of the"Sf.Spiridon"Hospital ,between February,1,2002- February 1,2003 with hypothermia (the esophageal or rectal temperature <35C).At least 2 ecg 12 leads were performed(at presentation and after the rewarming) and continuous ecg monitoring during the treatment.We tried to establish a relationship between the ecg aspect and the hypothermia degree and between the ecg changes during rewarming and the vital prognosis.Results: From 20 patients with hypothermia, 30% had a midle (35-32C),20% medium (32-28 C), and 50% severe hypothermia (<28C).The general death rate was 25%, all deaths belonging from the patients with severe hypothermia.In 35% of the patients could be noticed J wave (Osborne) specific, but not pathognomic for hypothermia, being more frequent in severe hypothermia (60%) and absent if central temperature >30C.The most frequent arhythmia was the sinusal bradycardia (50% of the severe hypothermia),followed by atrial fibrillation(33% of the medium or mild hypotermia).In cardio-respiratory arrests the rhythm was the asystolia (50%) and DEM (50%)-with a resuscitation success of 33%.In patients whose hypothermia was successfully treated ,the rhythm disorders disappeared in

35% of cases and the J wave aspect was remitted at 100% of the patients.Conclusions:The rhythm disorders in hypothermic patients are the more severe as the more advanced is the degree of hypothermia.The success of the rewarming therapy means also the disappearance of an important percentage of the ecg modifications.The J wave is characteristic to the hypothermic patients, the appearance rate being maximum in the severe hypothermia.

COMPARISON OF AN INTERACTIVE CD-ROM WITH WRITTEN TEXT ON THE RETENTION OF BLS FACTUAL KNOWLEDGE

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Decline of resuscitation knowledge has been shown over a period of six months. The aim of the present study was to evaluate whether the use of an interactive multimedia CD-ROM (JUST project) enhanced the retention of BLS factual knowledge six months after the course in comparison with written text. Methods: 70 trainees (46 Red Cross volunteers & 24 nursing students) who had never participated in a BLS course were recruited. Following a 6-hour ERC BLS course the factual knowledge of students was evaluated by a 10 questions MCQ test (MCQ-1). After the course students were randomly allocated in 2 groups to receive educational material: written text (group A), specially designed multimedia CD (group B). All trainees were evaluated six months later using a different MCQ test (MCQ-2). To assess whether the level of general BLS knowledge influenced trainees performance, an MCQ test (MCQ-0) was given before the course. Statistical comparisons were performed using the Wilkoxon sign rank test for paired data and the Mann-Whitney test for unpaired data. Results and Discussion: The MCQ-0 pre-course test showed that all trainees started from the same level of BLS knowledge. There was no difference between groups A and B and also between volunteers and nursing students. Both groups performed similarly at certification (MCQ-1) and 6 months follow-up (MCQ-2) tests. However, trainees of group A showed improvement of their MCQ scores ($p < 0.02$), in contrast to those of group B who showed retention but not improvement six months after the course. The subgroup of volunteers who received the text (group A-volunteers) showed significant improvement ($p < 0.02$) of knowledge in contrast to group A-students. Gender did not influence trainees performance in either group. Conclusions: Trainees who had access to the written text achieved better scoring on factual knowledge testing 6 months later in comparison to trainees who used an interactive multimedia BLS CD.

THE EFFECT OF COMMON RESUSCITATION FLUIDS ON COAGULATION

COATS T

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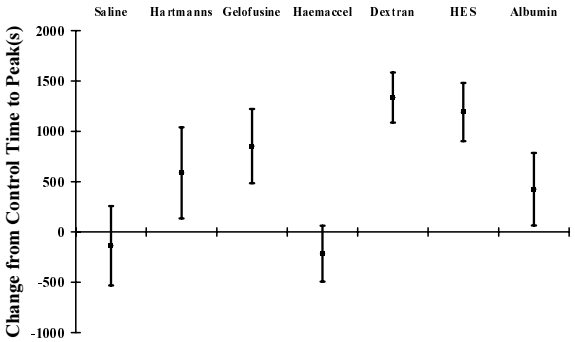
There is a confusing literature about the effect of resuscitation fluids on coagulation, and this in not usually a factor that influences a clinician's choice of resuscitation fluid. This study was performed to evaluate the effect of the whole range of commonly used resuscitation fluids on whole blood coagulation. Methods: Blood from 12 human volunteers was diluted to 40% with various resuscitation fluids. A whole blood thromboelastogram (Sonoclot profile) was immediately obtained. An undiluted blood sample acted as the control for each volunteer. The mean and 95% confidence interval of the change from control in the Time to Peak clot weight was calculated. Results:



Conclusions: A previously confusing literature on the different effect of resuscitation fluids on coagulation has been resolved by this work. Previous apparent contradictory results can be seen to be due to the particular pairs of resuscitation fluids that were compared. There is not a crystalloid / colloid split in the effects on blood clotting. Coagulation effects are often neglected when a resuscitation fluid is chosen – our results suggest that clinicians should pay more attention to this aspect.

AN OBSERVATION UNIT AT THE EMERGENCY DEPARTMENT IS USEFUL FOR THE MANAGEMENT OF PATIENTS WITH ATRIAL FIBRILLATION

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Atrial fibrillation (AF) is the most common cardiac arrhythmia managed at the Emergency Department (ED). Hospital admission is often needed. In our setting, patients with other conditions are intensely treated at an Emergency Department Observation Unit (EDOU) resulting in high discharge rates with good disease control. Objective: To measure the usefulness of an EDOU for AF management.

Patients and methods: We included all patients who presented to the ED with an AF electrocardiographically registered, from August 2001 until January 2002 (both included). In all of them we evaluated the following items: age, gender, main present complain, reason to remain at the EDOU, length of stay, complications (unstability or worsening of clinical symptoms), patient final destination (admission or discharge), and new admissions to the ED in the following week because of any related complain. Results: We included 280 patients (174 women), aged 73,3 (±12,9) years, and 134 of them remained at the EDOU. The reasons for remaining at the EDOU were cardiac rate control (48 patients, 36 %), heart failure (42 patients, 31 %), hemodynamic angor (22 patients, 16 %), digitalis intoxication (3 patients, 2 %), and other conditions not directly related to AF (19 patients, 14 %, 18 with respiratory failure of pulmonary origin). Mean length of stay at the EDOU was 12.35±6.7 hours. Nine (7 %) of these patients finally required admission. The other 125 (93 %)

were discharged from the EDOU. Only 2 of them were readmitted in the following week because of a related reason. Any of the patients managed at the EDOU presented clinical complications or worsening with respect to the admission status at the unit. Conclusions: A large proportion of AF patients can be managed at the ED provided there is an Observation Unit where patients can be continuously monitored. Thus we achieve an appropriate clinical control, a prompt discharge and a reduction in the number of hospital admissions.

NEW-ONSET ATRIAL FIBRILLATION AT THE EMERGENCY DEPARTMENT. PRESENTATION AND EVOLUTION

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Atrial fibrillation (AF) is often diagnosed for the first time at the Emergency Department (ED). Clinical features and initial and long-term evolution of patients with a first AF are variable. Objective: 1. To analyse the clinical profile of patients with a first AF at the ED. 2. To analyse initial and long-term evolution of these patients. Patients and methods: We recruited all patients who presented at the ED between August 2001 and January 2002 (both included) with a newly diagnosed AF. A documentation of the arrhythmia in a 12-lead electrocardiogram was required to be included in the study. We obtained the following items from patients included: age, gender, main present complain and its relationship with AF, time of onset of presenting symptoms, condition predisposing to AF if any (hypertension, diabetes, valvular or coronary artery cardiac disease), co morbid conditions, patient's destination (discharge or admission), and rhythm at discharge. With respect to the relationship between the main present complaint and AF we established 4 groups: 1) symptoms directly related to AF (palpitations, dizziness, shortness of breath, syncope), 2) AF complications (heart failure, angor or stroke), 3) symptoms related to a co morbid condition which can exacerbate AF symptoms, and 4) casual finding. One year later, a phone inquiry about cardiac rhythm, AF complications and new consultations to the ED was made to the same patients. SPSS 10.0 descriptive and non-parametric tests were used. Results: 106 patients (57 women) aged 73.5 (±13) years were included. Forty-six patients had hypertension, 10 had diabetes mellitus, 28 had a known cardiovascular disease (valvular heart disease in 5), and 46 patients had a chronic non-cardiac disease. Main present complain was directly related to AF in 58 patients (55 %), it was an AF complication in 29 patients (27 %) (20 heart failure, 3 angina, 6 stroke), an association with other co morbid condition in 15 cases (14 %), and a casual finding in 4 cases (4 %). Eight patients presented within 48 hours of onset of symptoms and were cardioverted at the Emergency Department. Twenty-four patients with an episode longer than 48 hours or of unknown duration cardioverted spontaneously or with the control of heart rate. The probability to convert to sinus rhythm was higher in younger patients (68.5±13 years vs. 77±11 years, $p<0.01$) and when the main present complain was directly related to AF ($p<0.01$). Sixty-three patients were discharged from the ED (42 of them after an observation period), 14 were admitted to the hospital and 2 died at the ED. Thirteen patients consulted again (6 because of a tachicardia and 7 because of heart failure) in the next year (none in the first week after discharge). Maintenance of sinus rhythm was related to lower age (60.9 ±14 years vs. 75,4 ±11 years, $p<0.05$), and to the absence of cardiac disease ($p<0.05$). Conclusions: First AF patients frequently present with an AF complication. Younger patients and patients who consult for symptoms directly related to AF have a greater chance of a long-term maintenance of sinus rhythm.

MAJOR DISASTER PLAN IN MAFRAQ HOSPITAL, CHALLENGES BY LOCAL DIFFICULTIES

BEBARS G

Mafraq Hospital, Abu Dhabi

Mafraq hospital is the busiest hospital in the emirate of Abu Dhabi, with 650 bed capacity. It contains all kinds of surgical and medical specialties in addition to several special care units of all categories and a large burn unit. It also has open heart surgery and organ transplant units. It is located at the trifurcation highway between 3 emirates: Abu Dhabi, Dubai, and Al Ain. The hospital is about 40 kilometers distance from the city of Abu Dhabi, where its staff reside. Mafraq Hospital is the main trauma referral center in the area and receives almost all the major disasters and accidents in the surrounding zones, including work accidents and air crash disasters. This presentation defines Mafraq major disaster plan, which was adjusted to face many internal problems in the hospital. Of these problems are the very small surface area of its Emergency Department, long distance between the hospital and the city proper, and also calling and bringing its staff fast enough to the hospital in time of disasters. The plan included many chapters and sub-plans such as communication plan, transportation plan, different assembly points, different areas for receiving, triage, and management of casualties, in addition to departmental plans. The plan is in effect for many years and has proved great success to face and solve our problems. It is now at its fourth edition and is tested 1-4 times yearly. The plan is routinely updated in response to any regional and local changes such as wars or unusual threats.

RUGBY WORLD CUP 2003, AUSTRALIA: PLANNING FOR A LARGE INTERNATIONAL EVENT IN A TERRORIST THREAT ENVIRONMENT

COOPER DM

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The Rugby World Cup is the third largest sporting event in the world and will be held in Australia from 10th October 2003, culminating in the final on 22nd November 2003 at Sydney's Olympic Stadium, at Homebush Bay. The Cup is expected to attract 85,000 visitors to Australia and will be broadcast to 209 countries to a potential audience of 4 billion. While the Sydney 2000 Olympic experience significantly assisted Sydney in mass gathering planning, a revisited situation analysis is necessary when confronting new terrorist threats. Indeed, the terrorist attacks in Bali, on 12th October 2002, changed the perception of Australia being an isolated and safe country. Over 200 people were killed (including 88 Australians) and more than 300 injured. 100 patients were urgently evacuated to Australia following the bombing. This presentation describes the strategic planning in regard to the Rugby World Cup 2003, with a particular focus on spectator and player

support, the management of live sites, public health management and anti-terrorism preparations. Planning for the consequence management of all forms of terrorist attack are described, including CBNR. Aspects of public health mitigation are emphasised including the need for biological and environmental surveillance.

PEDIATRIC TRIAGE IN MULTICASUALTY INCIDENTS: THE JUMPSTART TRIAGE TOOL

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Multiple and mass casualty incidents (MCIs), chaotic and stressful by nature, are often made more so by the presence of children among the victims. The task of primary triage can seem even more overwhelming when responders are called upon to make life or death decisions for the smallest victims. An objective primary triage system for children can promote greater efficiency and effectiveness of the triage process, while simultaneously helping to ease the emotional burden on those performing triage duties. The JumpSTART's pediatric's field MCI triage tool, developed by Dr. Lou Romig, is the only objective pediatric triage tool in use in the United States. Dr. Romig, a pediatric emergency and EMS physician and Medical Director for one of the US's Disaster Medical Assistance Teams, developed JumpSTART to parallel the START system, which is the most commonly used adult MCI triage tool in the U.S. and also commonly used around the world. JumpSTART, like START, utilizes physiologic parameters reflecting respiratory, circulatory and neurological status to assign patients to four priority categories. Decision thresholds reflect the wide variation in normal physiology among children of all ages, with the goal of minimizing both under- and over-triage. JumpSTART is now in use throughout the United States and Canada and is being taught in Germany, Japan, Switzerland, the Dominican Republic, Tanzania and a number of other countries. JumpSTART has been included in a number of disaster medicine curricula in the US, including that of the National Disaster Medical System. The tool has also been published in several EMS and disaster medicine texts.

OUTBREAK OF SEVERE ACUTE RESPIRATORY SYNDROME: ASSESSMENT OF EMERGENCY DEPARTMENT VISITS

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Introduction: Emergency department (ED) visits can be influenced by long-term and short-term factors. Disasters usually bring short-term influences for days and ED visits increase significantly that may overwhelm the capacity of services. Outbreak of severe acute respiratory syndrome (SARS) made a global threatening since March 2003. There was also an outbreak in Taiwan, significantly from this April to June. ED visits changed tremendously but different from literatures reported for other disasters. We'd like to share our experience with colleagues all over the world. Methods: This is a 1,000-bed, tertiary care hospital which has provided ED services for more than 100,000 visits annually in recent 3 years. When the SARS outbreak, daily ED visits were recorded for patient number, classification, severity and disposition. Data of these months was compared with the ones from year 2000 to 2002 for analyses. Results: Although the first patient was imported on this 3/25, SARS became out of control on 4/24 when a community hospital was closed due to nosocomial infection. The fear reached the peak in the middle May when two state-of-art medical centers were forced to shut down part of their services. Our ED visits dropped to 86.6% of the average in this April, 41.0% in May and 54.6% in June. Although the number of critical patients decreased, percentages increased. Pediatric patients decreased most, followed by miscellaneous, obstetrics-gynecology, trauma and general emergencies. Hospital admission number decreased, however, the percentage on total ED visits increased. Number of ED mortality remained stationary, however, percentage increased due to decreased number of total visits. Discussion: SARS is caused by a new corona virus that no one has the immunity against. Its strong transmission and substantial rate of mortality aroused the deepest fear of plague in peoples. ED visits decreased significantly in all classes of patients, especially when some state-of-art hospitals were shut down due to nosocomial infection. We contributed this phenomenon to diversion of patients to small hospitals or clinics because peoples though they were safer places. Some diseases and accidents did decrease secondary to universal precautions and decreased social activities. However, chronic-ill patients deteriorated because of interruption of medical cares. SARS has made prolonged but totally different influences on ED visits than other disasters.

HOSPITAL PREPAREDNESS FOR EMERGENCY SCENARIOS IN ISRAEL

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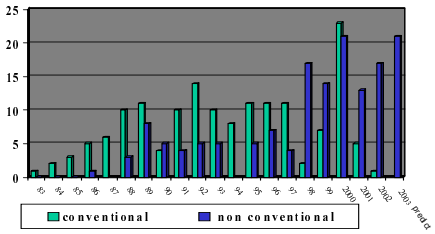
For nearly two decades, the process of preparing hospitals for emergency scenarios has been an ongoing effort. Since 1983, some 300 drills were performed in 24 general hospitals in Israel. We would like to share with you some of the skills and expertise acquired in that process as well as the lessons learned. Intensive preparations improve hospital preparedness for real-life events. The constant rising in the number of drills- up to 20 drills per year- induce a better understanding and overall preparedness for the exercised scenarios, complex as they may be. An increase in the level of preparedness allows us to move along to more complex scenarios without even alerting the hospital – such as surprise snap-drills. In the last decade, 208 drills were performed in general hospital nation-wide, compared to 92 drills performed in the previous decade. Casualties' simulation is performed by using up to several tens of solders and/or dummies. Drills promote the hospital capabilities of admitting casualties from a variety of scenarios – conventional and non conventional of weapons of mass destruction. The drill scenario is specifically 'tailored' for each hospital, according to its capabilities, assessed risks and other needs or constraints. Constant awareness of hospitals' state of readiness is critical for maintaining the proper balance between the nations threat and needs. The drills are performed on a three-years cycle, to improve preparedness. The first year drills include routine-time scenarios. Throughout the second year, wartime scenarios are exercised and the third year the hospital is challenged in scenarios, which proved to be difficult or produced an unsatisfactory result.

Hospital Drills Performed Over The Years



In recent years, after dealing with numerous mass-casualty events, hospital managers claim that continuous drilling improved their preparedness to handle such events. The vast experience accumulated in the Hospital Preparedness for Emergency Scenarios Branch in the Home Front Command and in the Ministry of Health's Emergency Department may aid any organization desiring to improve its hospital preparedness for emergency scenarios.

A WEB-BASED DISASTER PLANNING AND EXERCISE TOOL

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Introduction: We have constructed a web-based disaster planning and exercise tool using active server page and Javascript technique. By using the tool, users can construct disaster organizations which comply with the organization of Incident command system. Besides, users can play their roles via the Internet about the reaction that they should do during the disaster response. Method: The tool was constructed by analysing the rehearsal plans. A step by step guide was incorporated to help the user to build the concept of incident command system. Two virtual drills about hospital disaster response were held to test the performance of the system and the outcome of learning of participants. Results: The tools contained 2 parts. The disaster planning tool is ICS concept compatible. Users can easily complete their disaster plan by following the step-by-step guide. Another part is an Internet virtual exercise tool. Participants can play table-top exercise in the computer via Internet. In 2 virtual drills, forty-seven persons were joined. More than 80 percent of users granted that the system could help them to familiarize the disaster response contents and procedures. In a subjective survey about improving the knowledge of disaster response, 87 percents of users got improved. Conclusion: Disaster planning via the Internet and virtual exercise tools can help disaster training.

WEB-BASED AND PDA-BASED CHEMICAL HAZARD QUERY SYSTEM FOR CHEMICAL INCIDENTS

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Introduction: The aim of this study is to provide a quick query system for hazardous material of fixed facilities during a Hazmat incident. The hazardous materials of fixed facilities in Taichung city were investigated. Method: The characteristics, methods handling the hazardous materials were also collected from papers review. A query system using the combination of the characteristics and where the hazardous material was spilled out was built to decrease the numbers of possible hazardous materials. This database system was built up in either PDA-based or web-based system. The system has been tested during a disaster rehearsal. Results: Seventy-six percents of the user agreed that it is useful for enhancing the identification of hazardous materials. Conclusion: To make the system more efficient, integrations of the database about hazardous materials in various government authorities must ensue.

THE UNITED STATES TWENTY-YEAR EXPERIENCE WITH BOMBING EVENTS: IMPLICATIONS FOR TERRORISM PREPAREDNESS AND RESPONSE

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Objectives: To determine the number of injuries and deaths related to bombings in the United States from January 1983 to December 2002. To document the motivating etiology, target location, and explosive materials used for these events. Methods: Data were retrieved from the Arson and Explosive Incident System database from the Bureau of Alcohol, Tobacco, and Firearms and from law enforcement agencies. A retrospective analysis from 1983 to 2002 documented the number of bombings, injuries and deaths due to both explosive and incendiary devices. Attempted and premature bombings were documented. The morbidity and mortality of bombing events due to etiology, target type, and explosive material were determined. Results: In the United States, 36,110 bombing incidents occurred from January 1983 to December 2002. There were 28,529 bombing events and 7,581 attempted bombings. Explosive devices accounted for 21,237 events, incendiary devices accounted for 6,185 events, and premature bombings accounted for 1,107 events. Among attempted bombings, there were 5,616 explosive devices and 1,965 incendiary devices. A total of 5,931 injuries and 699 deaths resulted during the twenty-year period. As the motivating etiology for a bombing event, homicide accounted for 44.6% of the injuries and 72.8% of the deaths. In premature explosions, vandalism was the motive for 15.9% of the injuries and 31.0% of the deaths. By target type, private residences accounted for 29.9% of the incidents and 37.9% of the injuries, but they were the sites of 58.7% of deaths. Government facilities were targeted only 4.6% of the time but were the site of 16.3% of injuries and 33.9% of deaths. Smokeless and black powder accounted for 53.2% of the injuries and 50.0% of the deaths. Conclusions: Bombing events have caused a significant number of injuries in the United States, but they have caused a relatively small number of deaths. Communities should be prepared to respond to bombing events of any magnitude.

RECONSTITUTION OF LARGE QUANTITIES OF POWDERED ATROPINE IN THE PREHOSPITAL SETTING

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Study objective: The objective of this project was to develop a prehospital protocol for storage and reconstitution of large volumes of atropine from powder. The atropine could be used in response to a mass-casualty nerve agent attack. A protocol was tested and refined to see if a single paramedic team (2 persons) could provide the atropine in a timely manner. Additionally, an analysis was done to compare the cost of different forms of atropine that can be used in the prehospital setting. Methods: The protocol utilized 2 grams of solid (powdered) atropine, a 0.2 micron filter, and a one liter normal saline bag. This resulted in a final concentration of 2 milligrams (mgs) of atropine per milliliter (ml). The solution was mixed and filtered. One hundred 3 ml syringes were filled by hand in an ambulance setting. The syringes were pre-labeled with drug name and concentration. Queries were made to pharmaceutical distributors to make cost comparisons for commercially available forms of atropine. Results: A single paramedic team with no prior training was able to reconstitute one hundred 6 mg atropine syringes in under 10 minutes. The relative cost to provide 2 grams of powdered atropine was $11 versus $5,000 for commercially available pre-filled syringes. Conclusions: Large quantities of atropine can be reconstituted in the prehospital setting by paramedics in a timely manner. Additionally, there is a significant cost advantage for utilizing powdered atropine in the prehospital setting.

A DISASTER MANAGEMENT PLAN BETWEEN TWO HOSPITALS: JOINT TRIAGE

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Our situation of having a large inner city hospital, Kings County Hospital Center (KCHC) across the street from a state run tertiary care facility, University Hospital of Brooklyn (UHB) is common in big urban centers. KCHC recently opened a new inpatient center. UHB just completed a state-of-the-art Emergency Department (ED) and a new ED for KCHC is being built. While the two hospitals share the same medical school affiliation and staff, the administrations had not developed a unified disaster plan. After the 9/11 WTC attacks and the anthrax mail scares the possibility that a mass casualty event occurring with victims of nuclear, biological, or chemical injuries became real. The Chairman of Emergency Medicine (EM) made the case that a post-911 disaster plan required the combined expertise and unique facilities each institution had to offer. By joint triage we have developed a system whereby casualties will be triaged to specific areas based on their complaints and severity of illness. This system allows us to utilize the resources of each hospital in caring for a large influx of patients. Methods: An Emergency Preparedness Liaison (EPL) was appointed to the Disaster Committees of both hospitals. Centers of excellence at the hospitals were identified. KCHC had the facilities of a large urban Level One Trauma Center, while UHB had expertise in Cardiothoracic Surgery. KCHC's ED had greater overall capacity; UHB's ED had a larger decontamination unit. The EPL functioned as a liaison between both hospitals' Incident Command Centers. The Police, Fire and Office of Emergency Management reacted favorably to our joint hospital project changing traffic patterns to facilitate a unified triage system between the two hospitals. Results: Early disaster drills of this new conjoined emergency response system showed improvements in triage, tracking and treatment. Conclusion: We have found cooperation in disaster management is possible and beneficial to resource allocation.

HOSPITAL TREATMENT CAPACITY (HTC) FOR CASUALTIES EXPOSED TO IRRITANT GASES IN THE NETHERLANDS

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Injuries due to accidents during Ammonia and Chlorine transport can result in respiratory deterioration. Objective of this study is the determination of the HTC (= number of victims per hour per 100 beds that can receive adequate treatment) and the identification of the bottlenecks of its treatment. Before final treatment can start, adequate decontamination is required. The study also serves as comparison to a recent study in the UK that showed that 10% of the hospitals was satisfactorily equipped to deal with a serious chemical disaster. Materials and Methods: Questionnaire to all general hospitals. HTC determination: 1.Methods=Hospital Disaster Plan (HDP), separately asked after decontamination: Score 1:not available, 2:in preparation, 3:available, 4:as 3+tested, 5: as 4+regular drills/upgrading. 2.Personnel: Score 3=Combination of Physician + nurse trained in airway management. Score 4 or 5: depending on their participation of testing and drills. 3.Materials:Score 3=Combination Ventilation bed+Physician+Nurse, score 4 or 5, see Personnel. Next to this a table top exercise: Number of V-beds available <1h or 1-6 h, during 3 fixated moments in a week. Next to this a daily visit to the internetside of the Dutch IC's for potential vacant v-beds during Jul-Sep 2002, with correction of daily performed state of vacancy. Results: Average respons to all the items: 68%. HTC average score: Methods: 3,8 Personnel: 3,1 Materials:2,2 (respons:95%). Complete decontamination equipment: 5% of the hospitals (resp:45%). Number of v-beds available: T-t-exercise (resp70%=531beds): <1h: 9/100 beds, 1-6 h: 2/100 beds. I-site (resp 62%=353beds): during 1 day: 0,3 per 100 beds. Conclusion: 95% of the hospitals is unable to manage a serious chemical disaster. HTC=score 3. During 24h 1 victim per 300 v-beds can be treated if HDP=5. Average stay of IC-patient is > 1 day. If total IC-beds is 900, after the first 1h the HTC can be remain 0% for > 24h.

THE IMPACT OF HURRICANE GEORGES ON A UNIVERSITY COMMUNITY BASED EMERGENCY DEPARTMENT IN PUERTO RICO

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Objectives: The destructive power of a natural disaster is out of our control. There are few studies, and none in our territory, that examine the impact of a hurricane on an emergency department (ED). Our main objective was to identify the most frequent ED complaints during and after a national disaster; establishing a database to help improve development of the hospital's disaster plan and anticipate needed services. Methods: We conducted a retrospective review of 5,160 patients who visited our ED for a period of two weeks before and two weeks after the disaster. We used a standardized data collection template to gather patients' data, chief complaint diagnosis, treatment and disposition. Results: There was a marked increase in the number of ED visits during the period evaluated; 5,160 patients as compared to the same dates a year after and a year before 4,434 and 3,898 respectively. Only 2,718 medical records were available after the disaster. Male: female ratio was similar 56.8% vs 43.2% as well as the two age peaks; 0-9 years old (y/o) 28.2% and 20-29 y/o 19%. The most common complaints during the disaster period were trauma and ear, nose and throat complaints. There was a statistical difference in the numbers of trauma patients during this period P-value 0.00000815 as well as lacerations and fractures P-value 0.025 and 0.046. Other complaints with statistical difference were soft tissue injuries P-value 0.020, cardiovascular P-value .0000370, neurological P-value 0.00063 and genitourinary P-value 0.05. Conclusions: Natural disasters are definitively another aspect of our lives in the ED that we can not control, but we need to be prepared for them at all times.

MASS POISONING WITH CARBON MONOXIDE

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Professionals who respond to large-scale emergency situations often find themselves under a considerable amount of stress. The authors present a case report of a mass poisoning with carbon monoxide from the perspective of the EMD response. On-the spot problem solving necessary due to the non-existent disaster plan within the University Medical Centre in Ljubljana, Slovenia will be discussed.

PREHOSPITAL HANDLING OF CORPUS INJURY & COMPRESSION OF HANDS AND LEGS IN CRUSH SYNDROME (PRELIMINARY DATA)

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Background: Crush syndrome happens when part of the corpus or the limbs are entrapped for a long period of time (one to six hours). The real signs of crush syndrome are expressed when the injured patient or extremity is extricated. Purpose: The goal of this study is to describe patients with crush syndrome that EKAB (National center of first aid) managed in the prehospital setting, the delivery status of them to the hospital and the final outcome. Methods: We recorded the reasons for crush syndrome, vital signs, syndrome signs, delivery state, duration entrapped, therapy administered, duration of transportation and final outcome. Results: During the last five years EKAB treated 19 pts (14 male and 5 female). Nine of them were victims of an Athens earthquake (September 1999), 6 of them were in a workplace accident and 4 were in a car accident. The entrapment had to do particularly with the lower extremities and only in 4 cases was the corpus body entrapped. Duration of entrapment was always more than an hour and in some cases exceeded seventy hours. Two of these patients died in the field after they were extricated, although the treatment was proposed from Medicine. Fifteen of the patients underwent some kind of operative procedure and ten of them were hospitalized in an ICU. Three of these patients developed acute renal failure in the ICU setting but after CRRT techniques the final outcome was excellent. All patients had increased serum CPK and myosphairinouria was observed in the field in most of these patients. Proper management was instituted early resulting in good outcomes. Therapeutic interventions included: ABCDs for all patients and special procedures for suspicion of crush syndrome. Conclusions: Scene safety, with personal safety first, is important for EKAB personnel. A high index of suspicion and procedures before, during, and after extrication are important for the final outcome in patients suffering crush injuries.

ARE DOCTORS WELL INFORMED ABOUT DISASTER?

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Background: Physicians, especially general practitioners, play an important role and in many times as a first responder in disasters particularly in Iran where we have many natural disaster like earthquakes. Lack of confidence, training and an organizational framework may be a problem. Study Objective: We sought to evaluate the knowledge of General Practitioners (GPs) as first responders in major medical emergency and different specialist residents about disaster medicine. Methods: We administered a questionnaire with multiple choice answers about disaster medicine. 50 GPs and 50 different specialty residents who worked in emergency departments completed the questionnaire. Results: Only 30% of GPs and half of residents knew the correct definition of disaster. Only

22% of GPs and 20% of residents knew the proper definition of triage. 25% of GPs and 28% of residents have studied about disaster. Only 2% of GPs and 7% of residents attended a scientific session about disaster. Only 2% of GPs and 10% of residents felt confident in responding to a disaster. 82% of GPs and 91% of residents felt they should know more about disaster and disaster life support course is a necessity for physicians. Conclusion: Our physicians are not receiving sufficient training in disaster medicine, so there must be a serious attempt on the part of emergency medicine, the specialty most linked to disaster medicine, which is so new in Iran as specialty to train emergency specialist and also educate all physicians through physician disaster life support course.

ISRAELI-POLISH COOPERATION IN ORDER TO DEVELOP THE EMERGENCY MEDICINE SERVICES IN POLAND

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Emergency Medicine (EM) in Israel is a new profession. Nevertheless, the experience and knowledge of EM in Israel is extensive. Therefore Israeli specialists contribute to many countries for establishment and reorganization of Emergency Medicine Services (EMS). In October 2002 instructors from the Center for Resuscitation and Emergency Medicine Education (CREME) in Tel Aviv Sourasky Medical Center (TASMAC), Israel, under the auspices of the Israeli Ministry of Foreign Affair, visited Krakow Poland and delivered a trauma course to physicians, nurses and paramedics from different hospitals, EMS and fire brigades in Poland. The topics concentrated in trauma care in the EMS and hospitals, as well as the trauma team's role and cooperation among all health provider related to trauma. Following this course, the Israeli and Polish team cooperated once more and established workshop related to preparedness for Mass Casualty Incident (MCI), including conventional, biological and chemical MCI. The success of those program developed cooperation between this two institutions in order to re-organize EMS and Trauma Care in Poland. In May 2003 teams from Israel and Poland, delivered an Advanced Cardiac Life Support (ACLS) providers and instructors course in Poland, as well as a trauma course. The Israeli and Polish team also shared MCI Drill, evaluated by the Israeli specialists, based on their experience in MCI. The next program will include a fellowship for Israeli and Polish teams in both countries. The program that was delivered established with the local authorities in Poland, according to the local needs and included compressive comprehensive lectures and simulations. All programs were evaluated by the participants and changed ad-hoc according to local needs. This paper focuses on the program development, topics and evaluation that were made in order to help with the reorganization of trauma care in Poland. Both teams, from Israel and Poland consider this cooperation an important milestone to develop standards of care in EM all over. The Israeli Ministry of Foreign Affairs and the Polish Ministry of Health are supporting the program that is been described in this paper.

EMERGENCY DEPARTMENT AND THE CENTER FOR RESUSCITATION AND EMERGENCY MEDICINE EDUCATION COOPERATION IN ORDER TO DEVELOP EMERGENCY MEDICINE EDUCATION

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The Center for Resuscitation and Emergency Medicine Education (CREME) with the Emergency Department (ED) of Tel Aviv Sourasky Medical Center (TASMC), cooperates in order to develop the field of Emergency Medicine in Israel. Continuing Education programs in Emergency Medicine and Emergency Nursing is shared between the ED and CREME. Nurses and physicians from the ED instruct and teach at CREME as well as Emergency Nursing Course and other special projects in the hospital. Advanced Cardiac Life Support (ACLS) courses run on regular basis in the hospital, to all medical and nursing teams, guided by ED physicians and nurses. During the last 3 years, the Emergency Nursing course, under the auspice of the Nursing Division of the Ministry of Health, is run in the medical center, and ED team is taking part in designing and operating this course. The course continues for 1 year with a board exam at the end. Another special project established in the ED due to the security situation in Israel: ED teams instruct senior nurses from other hospital departments to help in the ED during Mass Casualty Incidents. The paper will present the cooperation between the ED and CREME and the programs developed in the field of Emergency Medicine and Emergency Nursing.

CHARACTERISTICS OF PATIENTS TREATED AT AN EMERGENCY DEPARTMENT IN THE CENTRE OF AMSTERDAM

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Objective: Description of patient characteristics (both referred and self-referred patients) at an emergency department (ED) in Amsterdam, and thus gain insight in the practice of emergency medicine (EM) Design: Prospective, observational Methods: From May 27th until July 4th 2001 (39 days) the following data were recorded for all patients visiting the ED: age, sex, form of presentation, diagnostics performed, treatment, clinical course leaving the ED. Per patient 1 diagnosis was scored using the ICD-10 classification. Results: During the study period 5234 patients were evaluated at the ED, 3885 (74%) patients were self-referred, 641 (12%) patients were referred by their general practitioner and 573 (11%) patients were referred by the emergency medical service (EMS). The self-referred patient was significantly younger (33 versus 50 years) and attended the ED more often outside office hours. Self-referred patients were mainly treated for traumatological complaints, referred patients suffered from cardio-vascular diseases, respiratory diseases and diseases of the digestive tract. Only 177 (4%) self-referred patients were admitted to the hospital, 389 (41%) referred patients needed admittance ($p<0.0001$). Conclusion: Emergency Medicine (EM) deals

with an undifferentiated patient population, the majority with minor health problems. Limited numbers of patients demand acute, specialist care.

INSTRUCTIONAL SKILLS CONTRIBUTING TO OUTSTANDING TEACHING

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Aim: To define the instructional skills that have the highest impact on outstanding teaching. Methods: 34/39 Students who followed four clinical rotations at the Department of Surgery, Al-Ain Teaching Hospital, UAE, responded anonymously to a structured questionnaire (n = 238) on the instructional skills of seven surgical consultants immediately after the rotation was completed. Students rated 14 items on a 7 point Likert-type scale. The last item was the overall rating of the teaching. Logistic regression was used to define the factors that contribute to very good and outstanding teaching. Results: Enthusiasm (p = 0.001) and explaining the subject matter clearly (p = 0.008) had a significant effect on being a very good teacher. Having knowledge of current diagnostic and therapeutic procedures (p =0.008) explaining the subject matter clearly (p = 0.004), giving opportunity to students for discussion and debate (p = 0.011) and stimulating student interest in the subject (p = 0.026) had a significant effect on being an outstanding teacher. Conclusions: Practical knowledge that is clearly explained in a way that stimulates the students and involves them in discussion has the greatest effect on being an outstanding teacher.

PATIENT EDUCATIONAL HANDOUTS ON THE INTERNET: QUALITY AND ACCESSIBILITY IN ENGLISH AND SPANISH

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Objectives: To ascertain the quality of information available on the internet in English and Spanish on 100 common medical conditions Design: A cross sectional search for health related information was conducted on 100 medical conditions using 6 search engines including 3 Spanish search engines. Interventions: Medical conditions were randomly chosen from emergency medicine discharge instruction-text database. Web sites were included if they were designed for the general public, were condition specific and did not require subscriptions or payment. Three reviewers independantly evaluated each site for relevant content, currancy of information, and the presence of promotional material. The reading grade level of the text was evaluated by the Fry readability graph method for English and Spanish. Data was analyzed using x2 analysis, Students t tests and the Kappa reliability test. Results: A total of 433 web sites met the inclusion criteria(288 in English and 145 in Spanish). Patient Educational Materials were available in 94% of the 100 medical conditions in English and 39% in Spanish. The Majority of these resources(80% in English and 67% in spanish; P=.004) were considered acurate and suitable for patient in the ED with an interrater reliability of more than 0.80. However, only a few pages in either language could be personalized (<5%), and explicit advertisements were identified in many sites (46% in English and 31% in Spanish). The mean grade reading level for the English-language web sites was significantly higher than Spansh Sites (12.1 versus 9.3; P<.001). On average, 88% of English and 67% of Spanish sites required > or = high school reading ability. Conclusion: Educational handouts are freely available on the internet for the vast majority of emergency medical conditions. Limitations include the inability to personalize instructions, explicit advertising, poor readability and the small number of Spanish-language web sites.

USE OF A DELPHI SURVEY TO ACHIEVE AN EDUCATION PROGRAM IN AN EMERGENCY DEPARTMENT

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Objectives: The future emergence of a new medical speciality (Emergency Medicine) will lead professional trainers to achieve specific education programs. Using an original method (Delphi survey), we decided to achieve our own local undergraduate education program for students. Material and Methods: Using the national objectives for medical students, the local activity, and the official program of the new speciality, each trainer (senior physician) had to describe his own vision of the education program for the service (ten objectives, learning methods and evaluation criteria). Using the Delphi method, each proposed program was discussed several times with the coordinator, and to be valid, each objective had to be accepted unanimously. A final program was validated during a meeting. Results: A final consensus was reached on ten general (17 initially) and 53 specific objectives (81 initially). The program (including objectives, learning methods and validation modes) is given to the students at the beginning of each learning session. Following the Delphi survey, trainers now speak the same language, have the same objectives, and are motivated for students' learning. Three trainers have registered for a medical education certificate. Trainers are now working on the internship education program. Conclusion: The Delphi method allows the achievement of a reasonable and a consensual medical education program. It leads professional trainers and learners to increased motivation that favours learning.

THE BELLEVUE EMERGENCY MEDICINE HANDBOOK (TEACHING GUIDE FOR EMERGENCY MEDICINE RESIDENTS, ROTATORS AND STUDENTS)

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The Bellevue Emergency Medicine Handbook is a pocket size guide written by EM residents for EM residents, students, and rotators. Focused of how to approach patients with various common EM complaints, the Handbook is designed to "guide" a user through an initial evaluation and interventions that are part of a standard diagnostic and therapeutic work up. The Handbook is available in both a pocket-size book and electronic format, and could be used as a valuable

teaching tool for students of Emergency Medicine both in the USA and internationally.

WHAT CHARACTERISTICS OF EMERGENCY MEDICINE APPLICANTS WILL PREDICT FUTURE PERFORMANCE AS AN EMERGENCY MEDICINE RESIDENT?

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Objective: To identify predictors of overall, academic, and clinical success at end of emergency medicine (EM)residency from a set of variables available at admission to the training program. Methods: In this pilot study, EM residents were confidentially assessed by EM faculty on performance in residency at time of graduation. Faculty compared a graduate to all residents they had previously worked with using the scale: >90th percentile(%tile), 70-89th%tile, 50-69th%tile, 30-49th%tile, or < 30th%tile. Predictors from residency applications included: demographics, ratings of med school attended(MSA), med school record (MSR), Dean's letter rating (DLOR), letter of recommendation (LOR), interview rating (IVR), USMLE score, Other Factors (i.e., athlete, class officer), etc. Data analysis: Univariate and multiple regression trees, and ordinal logistic regression with Friedman gradient boosting was used to model outcomes. Results: Of 54 graduates; 9.3% were rated by faculty as >90th%tile, 40.7% in 70-89th%tile, 35% in 50-69th%tile, 11% in 30-49th%tile, and 3.7% <30th%tile. Exploratory analysis showed MSA was the strongest predictor of overall performance. Multiple regression trees demonstrated MSA, DLOR, USMLE, and LOR were predictors, and with gradient boosting the most significant predictors were MSA, DLOR, and Other Factors. AOA honor society, gender, age, and prior paramedic were not predictors. Academic and clinical success were strongly correlated with each other and with overall success. Conclusions: Using regression modeling it may be possible to predict future emergency medicine resident performance.

COMPARISON OF A REQUIRED CLERKSHIP IN EMERGENCY MEDICINE TO TRADITIONAL THIRD YEAR CLERKSHIPS

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Objective: Required third year clerkships in emergency medicine (EM) remain exceedingly rare. Our goal is to compare a required clerkship in EM to the traditional third year clerkships (TC) Methods: Students completed an anonymous survey at the completion of their third year. Students compared the EM clerkship with TC in seven content categories: didactic teaching (DT), bedside teaching (BT), Access to Attending physicians (AA), access to senior residents (AS), availability of procedures (AP), work as a team member (TM), and ethics and professionalism (EP). Grading was on a four point scale (1-excellent, 2-good, 3-fair, 4-poor). Scores were reported as means +/- SD with paired t-analysis. Students also supplied information regarding their learning experience, any change in their attitude towards a career in (EM), and whether the clerkship assisted in the completion of their TC. Results: 100 of 124 (81%) of students returned questionnaires. EM TC P DT 2.1+/-0.8 2.1+/-0.6 0.62 BT 2.0+/-0.9 2.2+/-0.7 0.02 AA 1.5+/-0.7 2.2+/-0.7 <.001 AS 1.5+/-0.6 1.9+/-0.7 <.001 AP 1.5+/-0.7 2.3+/-0.8 <.001 TM 1.7+/-0.7 1.9+/-0.6 0.007 EP 1.9+/-0.8 1.9+/-0.6 0.61 There was a favorable response regarding their learning experience in the clerkship. 65% of students thought the clerkship influenced their attitudes towards EM as a potential career. 89% of students thought the clerkship assisted them with the completion of their other clerkships. Conclusion: Students judged a required third year clerkship in EM superior to TC in five of seven content categories (BT,AA,AS,AP,TM). The majority of students also thought that the clerkship assisted them with their career choice as well as with the completion of their studies. We hope that this information will assist departments to establishing third year clerkships in EM in this new era of critical evaluation of undergraduate medical education.

GOAT LAB IMPROVES EMERGENCY MEDICINE RESIDENT CONFIDENCE IN THE PERFORMANCE OF INVASIVE ED PROCEDURES

SLEIGH BC,

Darnall Army Community Hospital, Emergency Medicine Residency, Fort Hood Texas

Objectives: To identify invasive ED procedures that EM residents felt uncomfortable performing and to assess this level of discomfort before and after practicing them during a goat laboratory. Methods: A convenience sample of 22 EM residents (8 PGY3, 7 PGY2, 7PGY1) were given a questionnaire to identify procedures with which they felt uncomfortable performing. Their level of comfort was assessed before and after a single 3 hour laboratory session using the same survey. A scale of –2 to 2 for the five response categories was assigned. The Wilcoxon signed rank test was used to determine the significance of mean scale change. Results: Participants noted 7 procedures they felt uncomfortable performing: IV pacing, thoracostomy, thoracotomy, venous cutdown, cricothrodomy, peritoneal lavage, and pericardiocentisis. The average range of prior invasive ED procedures was thoracotomy (0.5) to thoracostomy (10.7). The 7 procedures were taught during the session. The table below summarizes resident confidence in their ability to perform these procudeures in as a group:

"I feel confident in my ability to perform invasive ED procedures"

Response:	Strongly Disagree	Somewhat Disagree	Neutral	Agree	Strongly Agree
Before	14	5	2	1	1
After	1	1	1	15	4

The mean scale change was + 2.59, ($p<0.001$). The mean scale change for confidence improvement for each of the 7 procedures performed ranged from + 1.32 to + 1.86 with p values ranging from $p<0.001$ to $p<0.022$: IV pacing + 1.55 ($p<0.020$); thoracostomy + 1.32 ($p<0.022$); thoracotomy + 1.82 ($p<0.020$); venous cutdown + 1.55 ($p<0.020$); cricothrodotomy + 1.69 ($p<0.001$); peritoneal lavage + 1.82 ($p<0.020$); and pericardiocentesis + 1.86 ($p<0.001$). Conclusion: A invasive goat laboratory appears to improve EM resident confidence in performing invasive ED procedures that they previously identified and uncomfortable.

GOAT LABORATORY IS AN EFFECTIVE TEACHING MODALITY WHEN COMPARED TO EACH OF THE ALTERNATIVE TEACHING METHODS

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Objective: To measure the effectiveness of a goat laboratory for invasive ED procedures verses the effectiveness to each of 6 alternative teaching modalities. Methods: A convenience sample of 22 EM residents (8 PGY3, 7 PGY2, 7 PGY1) were asked to rank the sessions utility against each of the 6 teaching modalities. A scale of –2 to 2 was used for each question's 6 response categories. Results: An average of 86 % of respondents ranked the session better than each of the following teaching modalities: Textbook ($p<0.001$), video ($p<0.021$), PowerPoint presentation ($p<0.021$), formal lecture (without video or PowerPoint) ($p<0.001$), and unsupervised patent encounter ($p<0.021$). 55 % of respondents ranked the session better than the most valued alternative, supervise patent encounter ($p=0.020$). Conclusion: A goat lab appears an effective teaching modality when compared to each of the 6 alternative teaching methods.

GRAVITY SCORES IN EMERGENCY MEDICINE

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Introduction : The gravity scores (GS) are the means to measure the clinical state of a patient in a particular situation. Several grading scales have already been described especially in the emergency medicine. What are the objectives and the utilities of the grading scales? Method: The Medline and Inist have been searched for the GS and the scores useful in the emergency medicine were selected. Results: Medical metrology. The GS are the measuring means useful for the assessment of the quality of care, for scientific research and for the legal protection of physicians. The physician defines a diagnostic probability and treats the patient accordingly. The use of the grading systems is helpful in this way and quantifies the diagnosis and treatment. The GS are the objective means measuring the "medical sense" of the physician useful to estimate the benefit/risk ratio of the medical care. Moreover patients may be compared by the grading systems. Fields. The GS can be divided into three categories: the scores that help in the therapeutic decision (scores of medical regulation, diagnostic scores), prognostic scores and assessment scores. For example the score of Malinas in obstetrics predicts the child delivery, the score of Wells is predictive of a pulmonary embolism, the NIH Stroke Scale measures deficits in patients with cerebrovascular accidents, the Glasgow Coma Scale evaluates the depth of a traumatic coma, the Revised Trauma Score measures the severity of traumatic injuries, the Fine score defines the severity of a pulmonary disease, the TIMI Risk Score assesses the prognosis of the myocardial infarction, or the Apgar score which evaluates the state of a new-born. Outlines. The GS allow a better interpretation of the results of diagnostic investigations (Bayes theorem). Several fields do not have grading scales, particularly the medical regulation of emergency medicine, which is a difficulty for the evaluation and training in these fields.

THE IMPACT OF STANDARDIZED HANDS-ON TRAINING ON BASIC LIFE SUPPORT SKILLS AND KNOWLEDGE OF THE RESIDENTS IN EMERGENCY MEDICINE

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Objective: To determine the current levels of knowledge and skills of the residents in emergency medicine (EM) relevant to Basic Life Support (BLS), and to investigate the potential benefit derived from a standardized theoretical and practical training session adding on the skills as well as on the knowledge. Methods: The study is designed as an intervention study on the residents in a University-based emergency medicine residency programs. All the residents underwent a pretest before the education session and a posttest following the session. Each resident took the test unaccompanied. The residents were asked to perform BLS on the recording CPR manikin regarding universal guidelines. The assessments were marked using a ten-step scale (Modified Berden Scale) with the highest score of 17. Each step was scored by an emergency physician regarding accuracy and effectiveness between 0 and 4. Results: Twenty-eight residents underwent the pretest, education and posttest stages of the study. According to Modified Berden Scale the pretest and posttest scores were 11.2±2.9 and 15.6±1.0, respectively and the mean difference was 4.36±2.9 (t-test, $p=0.000$). Likert scale disclosed that only 11 residents (39.3%) were rated as "good" and "very good" in the pretest whereas the corresponding figure in the posttest was 27 (96.4%) (t-test, $p=0.000$). Skills such as checking the airway patency (Wilcoxon signed ranks test, $p=0.000$), checking breathing ($p=0.000$), appropriate compression rate ($p=0.003$), delivering two effective breaths ($p=0.000$) were improved significantly in all residents. Depth of the chest compressions ($p=0.023$) was improved significantly in only residents below 2 years. Conclusion: The training process should comprise standardized courses employing suitable equipment in order with acquisition of the desired skills and knowledge. Such an approach will also allow continuous assessment of the trainees throughout the education process.

PROJECT VIPER (VIDEO INSTRUCTION OF PROCEDURES IN THE EMERGENCY ROOM): A NOVEL EDUCATIONAL TOOL IN EMERGENCY MEDICINE

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The VIPER project is a multimedia, video-based, instructional website which will teach medical students and housestaff various procedures performed in the emergency department. This allows for educational standardization of commonly encountered procedures. We have developed web-based, multimedia teaching modules on various procedural skills including arterial blood gases, central and peripheral intravenous line placement, lumbar puncture, foley catheter insertion, suturing, and thoracostomy tube placement. These VIPER modules can be accessed in the hospital, clinic, and even at home, so that medical students and housestaff might review procedures as needed. Each procedural module contains practical

teaching points, a list of indications and contraindications, and a digital video of the actual procedure. This resource will facilitate both primary education and subsequent reinforcement of procedural skills knowledge. To date, there are very few resources that provide procedural skills teaching, and none that combine video on demand with text and notes. We believe the ability to visualize the procedure, listen to commentary, and review notes on technique will provide an invaluable resource for all clinicians in training. Ideally this will contribute to more adequate teaching of procedural skills, greater clinician confidence, and ultimately increased patient and provider safety.

TEACHING PROCEDURAL SKILLS TO MEDICAL STUDENTS: AN EFFECTIVE HANDS-ON ELECTIVE COURSE

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Objective: An elective course on procedural skills was introduced to UC San Francisco medical school. This course is intended for second-yr students. Our goal was to teach basic procedural skills in order to provide them a solid foundation in procedural competency for their upcoming clinical training. Method: The students were taught the following nine procedures: Phlebotomy, peripheral IV line placement, central line placement, ABG, lumbar puncture, splinting, foley's, nasogastric placement, and suturing. An EM faculty gave a lecture in the first hour of class, and the students practiced these skills on mannequins and themselves in the second hour. They were allowed to perform these skills under direct supervision in an urban ED. Students were required to keep a procedural log. Results: Over two years, 80 second yr. students performed an average of 3.4 procedures per 8-hour shift in the ED. The distribution of procedures were: Peripheral IV 40%, Phlebotomy 24%, Suturing 16%, ABG 9.3%, Foley's 6%, Splinting 2%, NGT 1.3%, Central IV 0.4%, and LP 0.4%. For a follow up questionnaire evaluating students, 47% third yr. and 64% fourth yr. students responded. Enrollees of the procedure elective comprised 29% and 28% of the third- and fourth-year responders. By chi-square tests, these students felt significantly more comfortable with certain procedures. They were more knowledgeable about indications and contraindications for various procedures. No difference was found between the enrollee's and nonenrollee's perception of the importance of the procedures. Conclusion: A standardized, elective on procedural skills is essential to provide a solid foundation of procedural competency for preclinical students. Even 1 to 2 yrs after taking the elective, medical students who enrolled in the course are more comfortable and knowledgeable about procedural skills as compared to the nonenrollees.

DIGITAL PHOTOGRAPHY AS A TEACHING TOOL IN THE EMERGENCY SERVICES

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Aims: To assess the practical usefulness of the digital photography for the training of the house officers in the emergency services. Material and methods: During the period taken in between the 1rst of June 2002 and the 31rst of May 2003, photographs of pathological processes and complementary proofs of interest for clinical discussion and teaching benefit for the house officers, as well as invasive techniques typical of the emergency work were taken. The images were obtained "in situ", with a digital camera of 3 Million pixels of resolution, saving the images in a JPEG format at a minimum compression, in a database. With the obtained images, a database was made for the further teaching use. Results: In all, 476 photos of 189 different pathological processes were taken. The 44.5% of the photos were radiographies (n=212), of which a 52.8 % were of the thorax (n=112), 10.37% of the abdomen, 9.9% of several osteoarticular processes in which the diverse fractures were included, 8.49% of the spinal column, and a 18.44% of other localizations. A 3.9% was taken from Axial Computed Tomographies of which the 100% were of the cranium. Photographs of electrocardiograms were taken (n=14), representing the 2.94%. There were also taken 135 dermatological photographs (28.36 %) and 31 rheumatological photographs (6.51%). The remaining 13.7% were taken from invasive techniques, NMR, gammagraphies and other techniques. Conclusion: A big iconographic casuistry of multiple urgent pathological processes has been obtained, which facilitates and implements the training and the formative quality of the house officers in the emergency service.

KNOWLEDGE AND USE OF INFORMED CONSENT AMONG EMERGENCY MEDICINE RESIDENTS

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Objectives: Our goal was to evaluate Emergency Medicine (E.M.) residents' practices and perceptions of obtaining informed consent and to determine the need for additional formal training. Methods: We performed a cross-sectional survey of current residents in emergency medicine residency programs in New York State. The survey was distributed on April 17, 2003, and collected by June 30, 2003. A 15 question survey was mailed to residents via the residency directors of all New York State emergency medicine residency training programs. The questionnaire included questions regarding previous training received; general practices in obtaining consent, as well as whether or not consent is obtained for 13 particular procedures; comfort level when obtaining consent; and perceived need for additional instruction. The surveys were self administered and respondents remained anonymous. Individual residents were asked to complete the surveys and return them to their respective program directors. One program lost their initial mailing so an additional set was provided. In addition, two programs preferred the survey to be distributed via email which was also facilitated. This project was approved by the Institutional Review Board at the New York Methodist Hospital. Results: Thirteen of eighteen (72%) Emergency Medicine Residency programs in New York State responded to our survey. There were a total of 585 surveys

distributed and 127 collected (21%). A large majority of residents regularly obtain consent on non-emergent procedures: 43% always do so and another 39% obtain consent in more than 75% of patient cases. For emergency procedures, two-thirds (65%) of residents obtain consent less than a 25% of the time. Residents typically obtain consent before blood transfusions (98%) and conscious sedations (92%), and at least three-fourths of residents obtain consent on LPs (84%) and IV contrast (76%). There is more variability in residents' practices on procedures such as paracentesis (70%), CVP (69%), thoracostomy (66%), and joint aspirations (40%). In addition to the standard consent form and procedure note, 23% always write a progress note, 44% sometimes write a progress note, and 33% never write a progress note detailing the informed consent process. More than half of residents (56%) have felt uncomfortable obtaining consent on a procedure; for two-thirds of those residents, the reason is that they did not understand all the risks, benefits and alternatives. Overall, few residents feel they provide comprehensive information to patients: 26% of all E.M. residents are very confident, 61% are only somewhat confident, while another 13% are not very or not at all confident that they disclose all pertinent risks and alternatives to patients. The majority of residents (62%) have never received structured instruction on informed consent, and only 17% have been trained on the issue during their residency. Two-thirds (66%) of all E.M. residents believe formal training is necessary and six in ten (59%) say they are interested in receiving more training. Half of residents say a lecture would be the best format for additional training; fewer said they would prefer a video (27%) or written information (18%). Conclusions: There is inconsistency concerning the practice of obtaining informed consent amongst E.M. residents. There is wide variability in the selection and the means of documenting procedures for which informed consent is being obtained. E.M. residents' confidence and comfort levels in obtaining informed consent are low. Few feel they have full knowledge of all risks and benefits when obtaining consent. Few residents have had formal training in informed consent, and hardly any have received training during residency. Most residents say they would benefit from more formal training on the issue. It would be prudent for programs to explore their options for providing formal training.

ACCREDITATION OF EMERGENCY MEDICINE IN PORTUGAL; EVOLUTION AND STRUCTURE

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The Committee for Accreditation of the Competence in Emergency Medicine, Portuguese Medical Association

The Portuguese Medical Association has been preoccupied with the evolution of our EMS. Teaching and training of Physicians, working in Pre-, Intra- and Interhospital EMS, is one of the problems encountered in our System. The definition of teaching contents and curricula is one of the key tasks of the Portuguese Chamber of Physicians. Since Emergency Medicine is becoming more relevant, it was absolutely necessary to implement an Accreditation Model ("Competence in Emergency Medicine") as a first step to define minimal standards in teaching and professional experience for Physicians working in this area. Finally, in May 2003, the first group of Portuguese Physicians received their accreditation. This Study describes the historical evolution of this accreditation model and its contents. It also compares the recommendation of EuSEM regarding "Core Curricula" with the Portuguese Model.

SIMULATION AND MANAGEMENT GAMES FOR TRAINING COMMAND AND CONTROL IN EMERGENCIES

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The aim of our project was to introduce and implement simulation techniques in a problematic field of increasing health care system preparedness for disasters. This field was chosen as knowledge is gained by few experienced staff members who need to disperse it to others during the busy routine work of the system personnel. Knowledge management techniques ranging from classifying the current data, centralized organizational knowledge storage and using it for decision making and dispersing it through the organization were used in this project. In the first stage we analysed the current system of building a preparedness protocol (set of orders). We identified the pitfalls of changing personnel and loosing knowledge gained through lessons from local and national experience. For this stage we developed a database of resources and objects (casualties) to be used in the simulation in different possibilities. One of those was the differentiation between drills with trainer and those in front of computers enable to set the needed solution. The model rules for different scenarios of multi-casualty incidents from conventional warfare trauma to combined chemical/toxicological as well as, levels of care outside and inside of hospitals- were incorporated to the database management system (we used Microsoft Access' DBMS). The hardware for management game was comprised of serial computers with network and possibility of projection of scenes. For pre-hospital phase the possibility of portable PC's and connections to central server was used to assess bi-directional flow of information. Simulation software (ARENA) and graphical interface (Visual Basic, GUI) were used as shown in the attached figure. We hereby conclude that our system provides solutions that are in use in different levels of healthcare system to assess and improve management command and control for different scenarios of multi-casualty incidents.

BASIC CARDIOPULMONARY RESUSCITATION PROGRAM FOR HIGH SCHOOL STUDENTS (PROCES). EDUCATIONAL CHARACTERISTICS.

DÍAZ N, MIRÓ O, ESPINOSA G, JIMÉNEZ S, COLL-VINENT B, BRAGULAT E, HERNÁNDEZ-RODRÍGUEZ J, SALVADOR J, SÁNCHEZ M

Centre d'Ensenyament Secundari Molina, Barcelona, Urgències Medicina, Hospital Clínic, Barcelona, Nestlé Espana SA. Esplugues de Llobregat, Barcelona

Aim: Specific programs are needed to teach basic cardiopulmonary resuscitation (b-CPR) to teenagers. If they take these programs at school, educational course characteristics will be one of success keys. The aim was to analyze a b-CPR program called "Programa de Reanimacio cardiopulmonar Orientat a Centres d'Ensenyament Secundari" (PROCES) from an educational point of view. Material And Methods: Medical

and pedagogical project directors wrote together a couple of handbooks (one for teachers, one for students). To assess PROCES from a educational point of view, both authors and teachers -from high schools where PROCES was taught- opinions were taking into account.

Results: As Spanish educational law allows teachers to pick non-mandatory credits within school season, whenever it was possible, PROCES was included in related-to-health subjects. So, it was mostly taught in the Natural Sciences subject, in which PROCES agreed with its table of contents. PROCES was split in seven intended-calling-attention chapters (1-Are we really ready?; 2-Getting informed; 3-How do we die?; 4-The chain of survival; 5-Back to life; 6-Rehearsal; 7-Now, yes!). Teenage-fashioned drowings were distributed among the handbook. Specific concepts, methods, and attitudes pointed out in each chapter had to be reached by students. To make sure that teachers of high schools got involved and took part in the program, theoretical contents compiled in the first 4 chapters were prepared to be taught by them. Sanitary personnel were in charge of teaching the next 2 chapters, which included how to perform b-CPR. The entire 6th session was shot and recorded in VCR format. Finally, within the 7th session, students watched the recorded material, and teachers stimulated a discussion about how society faces the death. To assess the degree of students learning, they took a 20-question exam with multiple answer before and after the program (results are presented in a separated abstract). At the end of the PROCES, teachers and students were requested to give their opinion about the program. Conclusions: PROCES was more than welcome by both teachers and students wherever taught. A significant increment in the degree of learning and b-CPR skills was noted among students. However, teachers identified some aspects to be improved. Grant: PROCES was partially granted by NESTLÉ Espana SA.

BASIC CARDIOPULMONARY RESUSCITATION PROGRAM FOR HIGH SCHOOL STUDENTS (PROCES). RESULTS FROM THE PILOT PROGRAM

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Aim: PROCES (Programa de Reanimacio cardiopulmonar Orientat a Centres d'Ensenyanca Secundaria) is aimed at teaching basic cardiopulmonary resuscitation (b-CPR) to teenagers within high school. The aim was to analyze results obtained from the pilot program. Material And Methods: PROCES was split in 7 sessions. Specific concepts, methods, and attitudes pointed out in each session had to be reached by students. The first 4 and the 7th session were prepared to be taught by teachers of high school. Sanitary personnel were in charge of teaching the 5th and 6th sessions, which included how to perform b-CPR. To assess the degree of students learning, they took a 20-question test before (PRE-PROCES) and after (POST-PROCES) the program. The test was divided into two parts: 10 question related to b-CPR concepts, and 10 questions regarding b-CPR skills. Finally, students were requested to rate the program from 0 to 10. These data along with epidemilogical characteristics from the first 250 students were collected and analyzed. Results are presented in percentages, and mean (SD). Results: Students were 14 years-old in 36%, 15 in 40%, 16 in 22%, and 17 or more in 2%. Fifty-five percent was male, 18% would like to study a health-related career, 39% did not pass at least one subject within the last school season, and 13% had previously taken a first-aid or similar course. Regarding PRE-PROCES test, the mean mark (over 20 points) was 8.6 (2.8): 4.2 (1.5) in concepts and 4.4 (1.5) in skills. After PROCES, marks improved up to 14.2 (3), with 6.1 (1.9) in concepts and 8.2 (1.6) in skills ($p<0.001$ for all comparisons). There were no differences between gender, intention or not to study a health-related career, and having or not any non-passed subject. However, those who had previously taken a first-aid course got significantly better marks in the test and in the skill part. These differences disappeared after PROCES completion. Students rated the theoretical part as 7.9 (1.1), the skill part as 8.2 (1.2), and the sanitary personnel as 8.4 (1.1). All these three parts of the PROCES were rated significantly worse by students with at least one non-passed subject within the last school season. Conclusions: PROCES is an useful tool for teaching and improving teenagers' knowledge and skills in b-CPR. The level of skills reached by students was very good, although the teaching of theoretical concepts should be improved. In general, PROCES was well welcome by students. Grant: PROCES was partially granted by NESTLÉ Espana SA.

EXPOSURE AND COMFORT OF EMERGENCY MEDICINE RESIDENTS WITH THROMBOLYTIC THERAPY FOR ACUTE MYOCARDIAL INFARCTION

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Objectives: The primary training sites for many EM residencies utilize primary angioplasty as the preferred method of reperfusion for acute myocardial infarction. Nationwide, however, thrombolytic therapy (TT) is much more frequently the reperfusion strategy utilized. Some have voiced concern that EM residents are graduating without sufficient training and experience in the delivery of TT. The objective of this pilot study was to assess senior EM resident experience and level of comfort with TT. Methods: A confidential survey was distributed to senior EM residents in three training programs in June 2002. Senior residents (SR) were defined as PGY 3 or 4. Repeat surveys were distributed to non-responders to improve the response rate. Descriptive statistics, confidence intervals and regression analysis were performed. The study received IRB approval. Results: Three EM residency programs (two PGY1-4 format, one PGY1-3 format) with 56 SR were surveyed; 31 SR were graduating residents (GR). The SR response rate was 87.5%; GR response rate was 87.1%. The mean number of patients given TT by each SR was 3.57 (95%CI 2.34-4.79) and GR was 3.86 (95%CI 1.95-5.76). 10 GR (34.5%) had never given TT. 71.4% of patients treated with TT were seen at secondary training sites. There was no significant difference in TT exposure related to program format. Residents who were moonlighting used TT 6 times. The mean hours of didactic instruction received by GR in TT was 1.38 (95%CI 1.051-1.707). SR reported a mean level of comfort (LOC) of 3.29 (95%CI 2.965-3.607) on a 5 point scale (5=very comfortable). GR reported a LOC score of 3.41 (95%CI 3.10-3.73). Regression analysis showed no

association among the LOC and the number of times TT had been given, the amount of time spent moonlighting, or at secondary training sites. Conclusions: This pilot study suggests that residents have limited training, experience, and comfort with TT. This training flaw, if shown to be widespread, must be addressed.

LONG TERM EVALUATION OF THE TEACHING OF BASIC CPR

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Background: Given the importance of teaching CPR to the population, and the great interest expressed in CPR by the population, we believe a long term study to be of great interest. Goals: General: Evaluation of BCPR protocol and technique in pupils who received lessons according to AHA standards 1-5 years ago. Specific: (1) Detection of mistakes in the protocol; (2) Detection of mistakes in the following techniques: respiratory tract opening, checking for breath and correction; arrest detection and correction; (3) Evaluation of BCPR effectiveness; and (4) Assessment of which aspects need reinforcement and how often refresher courses should be given. Method: 537 people who had been previously trained were asked to participate in a survey. In no case were they told that this was a test. 98 subjects accepted the invitation, but only 65 came to the scheduled appointment. After a brief interview, subjects were invited to perform a BCPR simulation on an Anne-type Laerdal doll. Examiners are Osakidetza and S.M.I.U.C. BCPR monitors. Results: Most frequent mistake: Incorrectly following protocol: 63%; Least frequent mistake: Checking for a breath: 4.6%; BCPR completed with no fatal errors: 67.7%; BCPR completed with no errors: 32%. 90.5% of those who committed a fatal error had received the course more than 2 years ago. Conclusions: Once taught, the BCPR technique is remembered in an acceptable percent for a considerable time, not unlike the skills of swimming or riding a bike. It is important to reinforce the protocol during the course, and refresher courses should be taken every 2 years.

PERSONALITY OF AN EMERGENCY MEDICINE (EM) PHYSICIAN

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Background: For decades, it has been known that there are strong associations between personality type and vocation. The Myers-Briggs Type Indicator (MBTI) has been used to guide medical student choice of specialty. The MBTI uses 4 dichotomies to define personality as one of 16 types. Many subspecialties of medicine have specific 4 letter MBTI codes. A previous hypothesis from a national sample of emergency physicians was ENTP. Confirmation or validation of this personality type from one institution has never been described. Objective: This prospective study reports an "average" EM personality type from one academic institution to aid prospective medical students in subspecialty choice. Methods: We consented and surveyed a convenience sample of EM residents and faculty at an academic medical center. Participants completed MBTI Form M, consisting of 93 questions. Raw scores were classified into 4 main dichotomies: Extroversion (E) and Introversion (I), Intuitive (N) and Sensing (S), Thinking (T) and Feeling (F), and Judging (J) and Perceiving (P). Raw scores and percentages indicated strength of preference for each dichotomy. Clarity was determined using MBTI ordinal scale: slight, moderate, clear, and very clear. Results: The sample included 56/64 physicians.

E	I	S	N	T	F	J	P
593	542	670	734	762	534	595	592
.522	.478	.477	.522	.588	.412	.501	.499

The preference clarity for E-I, S-N, and J-P was slight. The clarity for T-F was moderate. Conclusions: This study found the mean MBTI of an Emergency Medicine physician to be ENTJ; energy is drawn from the outer world of people and things, focus is on the future with a view of patterns and possibilities, decisions are made using logic and there is an organized approach to life. Clarity of 3 of the 4 dichotomies was slight and therefore merits a larger sample to validate. Clarity along the decision-making dichotomy of thinking versus feeling was found to be moderate, supporting decisions made with logic and rationale rather than emotion.

ULTRASOUND IN MEDICAL SCHOOL: A CROSS SECTIONAL COMPARISON OF MEDICAL STUDENT'S PERCEPTION OF ULTRASOUND ABILITY

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Background: Ultrasound (US) has been called the stethoscope of the twenty first century, yet educational research on medical student US training has been limited. This study compared the perception of US abilities between medical students enrolled in an extracurricular Evidence based learning program (EBL), that exposed first year medical students to diagnostic US, with medical students who randomly received US training throughout their general curricula. Methods: Students perception of their US ability was assessed with an online survey sent to 1st – 4th year medical students asking them to report the number of hours of US training and to quantify their comfort level (ordinal scale (1-10)) in a series of practical US tasks: detecting pericardial effusion (PE), detecting aortic caliber (AC) >3.0, detecting free fluid (FF) in the torso of a trauma patient, detecting an intrauterine pregnancy (IUP) and overall comfort (OC). Quantitative data were analyzed using descriptive statistics and students t test (alpha<0.05). Results: Two-hundred one medical students responded (23.9% response rate) with 35 of these being EBL (E) students and the remaining 166 being Non EBL (N). Total hours of didactic (E-16.9, N-3.07) and hands on US training (E-16.6, N 2.25) was statistically significant between the two cohorts. Compared with the control, EBL trained students perceived themselves as being more competent with each individual sonographic task as well as having a higher overall comfort.

	PE	AC	FF	IUP	OC
EBL	5.41	5.93	4.83	5.08	5.29
N EBL	3.14	3.38	3.52	3.7	3.02

Conclusion: Ultrasound training can be successfully integrated into the medical school curricula. Ultrasound is used by physicians in many fields of medicine and its practical applications continue to grow. According to this study there was a significant trend toward increased confidence and self

reported competence after only minimal formal ultrasound training.

QUALITY CONTROL ON BASIC LIFE SUPPORT (BLS) COURSES

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Background/objective: Procedures and skills are the keystone to perform basic CPR (cardiopulmonary resuscitation), and are necessary to successfully resuscitate a patient. These skills are learned to varying degrees by trainees. Thus, as a quality control and evaluation of BLS instructor and students we have designed a prospective study to determine whether any particular skill is difficult to acquire. Methods and Results: We analyzed data from a sample of 406 trainees who attended a 20 hour ALS (Advanced Life Support) course. Students underwent two tests: T1 (before the course) and T2 (at the end), both tests were performed under the same conditions. Data were studied with an established statistic (chi-square test). Using a computerized manikin such as AmbumanTM and Ambu MegacodeTM that displays and prints statistical summaries of CPR performance, we obtained 6 items related to ventilation and to cardiac massage. These were: Initial Ventilation, (instructor evaluates whether the trainee performs the two initial ventilations before starting with compression), (T1=1.38% / T2= 81.60%); Respiratory Frequency, normal value (nv): 8-10 ventilations per minute (vpm), (T1= 2 vpm / T2= 6 vpm); Supplied Volume, nv: 800-1200 cc, (T1= 200cc / T2= 600 cc); Cardiac Frequency, nv:80-100 beats per minute (bpm), (T1= 40 bpm / T2= 48 bpm); Sternum Depression, nv: 4-5cm, (T1= 3.3cm / T2= 4 cm); Hand Position, (we evaluated the percentage of times the hands were out of place), (T1= 7.8% / T2= 1.3%). Conclusions: Surprisingly trainees obtained lower scores on cardiac massage than on ventilation skills, probably because the instructor emphasized ventilation more than cardiac massage, due to poor outcomes on the initial test. The group concluded that the use of such computerized manikin helps both, to evaluate students and instructors and in our case, instructors should emphasize all aspects of CPR performance in spite of initial results to attain an effective resuscitation.

RESIDENT TRAINING IN DIGITAL PALPATION AND SHIOTZ TONOMETRY IN THE EVALUATION OF ELEVATED INTRA-OCULAR PRESSURES

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Background: Intra-ocular pressures (IOP) are important clues in patients complaining of eye pain. In the absence of appropriate equipment, digital palpation, a trainable skill may be used to assess for elevated IOP. Objective: To determine resident concordance of digital palpation with Shiotz tonometry in the evaluation of elevated IOP. Methods: Porcine heads were harvested postmortem. A curved Kelly and a hemostat were used to tunnel into the retrobulbar area. A 12 French Foley catheter was advanced into the tunnel behind the globe. The balloon of the Foley was directly behind the globe in contact posteriorly with the bony orbit. The balloon of the Foley was inflated with saline inducing a proptosis of the eye against the lids. Pressures measured by the Shiotz tonometer were found to be directly proportional to the degree of inflation of the balloon. Residents were in-serviced on digital palpation and use of the Shiotz tonometer. Individually, each resident blindly evaluated paired eyes – one normal and one with elevated IOP. A blinded observer recorded their responses. Results: Pooled responses of correct identification of elevated pressure on paired samples by digital palpation: 100%. Correct identification of elevated ocular pressure in paired samples by Shiotz tonometry: 76%. Conclusions: Residents, after a short in-service on digital palpation and use of Shiotz tonometer, were capable of determining which of the paired globes had elevated IOP. Digital palpation by residents was more reliable than Shiotz tonometry by residents in identifying the globe with elevated IOP in paired samples.

RESIDENT TRAINING IN THE VISUAL ESTIMATION OF BLOOD LOSS DURING VAGINAL BLEEDING

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Background: An estimation of blood loss is important in patients with vaginal bleeding. Estimates by patients are notably inaccurate. Estimates by number of pads are confounded by the variety of products available and varied capacities of absorption. Objective: To estimate blood loss by visual inspection of spotted or soaked feminine napkins. Methods: Residents were asked to estimate blood loss by inspecting 8X10 color photos of feminine napkins soaked with known amounts of discarded CBC blood unknowns. Their responses were recorded. Residents then reviewed a tutorial which consisted of 8X10 color photos of similar napkins soaked with labeled amounts of discarded CBC blood. Residents were again shown the unknowns. Each resident was asked to estimate volume of blood per pad by visual inspection. Resident responses were recorded and checked for concordance before and after training. Results: Pooled responses from all participants: Before tutorial: percentage correct 48.5%;136 responses. After tutorial: percentage correct 88.9%; 136 responses. With the exception of one respondent, all improved their successful estimation of volumes. Conclusions: After viewing a simple tutorial, residents significantly improved their ability to estimate the amount of blood absorbed into the pad by visual inspection. Resident training in visual inspection of soaked pads may assist in the estimate of blood loss during vaginal bleeding. Limitation: Discarded CBC blood may have different diffusion pattern than whole blood..

ELECTROCARDIOGRAM INTERPRETATION TRAINING IN US EMERGENCY MEDICINE RESIDENCY PROGRAMS

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Objective: To determine the current state of electrocardiogram (ECG) interpretation education in US emergency medicine (EM) residency programs (RP). Methods: An internet questionnaire on ECG education was developed and emailed to all program directors (PD) from 125 US EM RPs. Results:

A total of 99 of 125 (79%) PDs filled out the survey. The majority report using emergency department instruction (EDI) (99%), lecture-didactic (L-D) (98%), and lecture-cases (L-C) (98%) to teach ECG interpretation, while 34% use computer-based learning and 12% use ECG laboratories. EDI (4.6/5) and L-C (4.6/5) had the highest value. Programs varied in hours spent on formal ECG curriculum with 11% reporting 1-3 hrs per year and 37% reporting > 10 hrs. PDs were less comfortable with reading skills of PGY-1 (2.8/5) and PGY-2 (3.8/5) residents than PGY-3 (4.5/5) or PGY-4 (4.5/5). The majority of programs use clinical observation (CO) (96%), lecture observation (LO) (76%), and hypothetical case-scenarios (HCS) (57%) as ways to determine competence while fewer use formal testing (FT) (27%) and informal testing (40%). CO (4.6/5), HCS (4.2/5) and FT (4.1/5) were rated highest to determine competence. A total of 91% use a personal or dept. ECG (PDF) file, while fewer use the CORD ECG databank (CORD) (60%), test-based material (59%), and internet-based tools (25%). The highest value was placed on the PDF (4.6/5) and the CORD (3.9/5). About 38% support hospital credentialing for EM physicians and 32% supported credentialing for graduating residents. Conclusions: A variety of teaching programs in ECG interpretation exist in US EM RPs. EDI, L-C, and L-D are the most frequently used and have high reported value. PDF and CORD are used most commonly as resources and have the highest utility. CO and LO are the most widespread ways to determine competence. While 1/3 of PDs are for credentialing EM physicians, most are comfortable with residents' ability by the 3rd and 4th year.

EMERGENCY MEDICINE INDUCTION COURSES

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Background: It is well recognised that the transition from ward based to emergent medicine can be a difficult one especially due to the acute and unpredictable nature of the patient case-mix. We present our experience with a two day induction course for new trainees to try and prepare them for conditions and scenarios they may have hitherto found difficulty recognising and treating. Methods: We enrolled twenty-four people of diverse ethnic and medical background into a two day course comprised of sixteen clinical modules with four supplementary lectures on areas of particular interest. All clinical modules were supplied by registrars and consultants in the relevant fields and groups were limited to six people to ensure a more personable learning atmosphere. Feedback was on the basis of an evaluation form with a visual analogue scale where all lectures / clinical modules were individually rated with participants encouraged to give written opinions in areas provided. Results: The course was well received and evaluations were generally very complimentary. All clinical modules were marked highly and a summary of results is provided. Confidence in the participants regarding their clinical skills was higher after the course conclusion than before. Conclusions: It is our opinion that emergency departments should provide a similar induction course for all aspiring emergency physicians. It should be clinically based and with the content adjusted by the attending physicians as the experiences of participants may vary widely.

EVALUATION OF THE FEED BACK FORMS ON THE APPLICATION OF E-LEARNING PROCEDURES TO AN EMERGENCY MEDICINE COURSE FOR MEDICAL STUDENTS

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Background: The Faculty of Medicine of the University of Eastern Piedmont in Novara approved the implementation of a course on Emergency Medicine (Emergenze Medico Chirurgiche – EMC - an obligatory course, usually the last exam before graduation) in the Academic year 2002-2003. In this course the application of new multimedia and distance learning tools were added to the theoretic lessons and training skills on manikins and patients (as reported in another abstract presented). At the end of the course, we provided the students a feed-back form for the evaluation of the impact and the level of appreciation (or disagreement) of the E-learning tools on their education. Materials and Methods: 42 students participated in the course. For all of them the exam called "Emergenze Medico-Chirurgiche" was the last one of the medical school. They all received the feed back form via the E-learning platform provided by the University (MOODLE); the questionnaire was filled out and returned before the final exam. Results: From the feed back forms, the most interesting answers were the following: (1) The interest in the EMC before the course itself was already very high, 39/42 students at least "interested" in the matter; 9.5% increased their own interest to "very interested". The students who continued to show a low interest remained the same at the end of the course (4.8 %). (2) All the students used the e-learning platform to download the theoretical lessons in advance of when they were scheduled. One third judged as useless to have the content of the lessons before, 48% as "useful" and 9% as "very useful". (3) 35/42 (83.3%) of the students used the synchronised system called "Centra-One Symposium" that allowed a synchronous on-line interaction with the tutor; 45% of them found this tool "very useful", 35% as "useful" while "17%" as "useless". A further investigation among these last students demonstrated that this was due to troubles with Internet connection from their private house. (4) 83% of the students defined the system we used as satisfactory and useful for their preparation and globally superior to conventional ways of teaching. (5) All of them agreed that this system could be an excellent tool to integrate the usual teaching system but that it cannot substitute for it. Conclusions: This new approach to didactic tools did not serve as itself, in increasing the students' interest in the EM. This is because most of them already made the choice for their future specialty. In the meanwhile, the involvement of the single student in the learning system was very well appreciated and evaluated. This innovative multimedia, interactive teaching seems to be a "winning" method for the future of teaching, independently from the program.

AUTOMATED EXTERNAL DEFIBRILLATORS

(AED) FOR FIRE DEPARTMENTS – SHOULD AN AED BE ON HAND FOR FIRE FIGHTERS USING A BREATHING APPARATUS?

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Goal: Wearers of breathing apparatuses (SCBA) are subjected to considerable physical stress when fighting fires. Fire fighters have an increased risk for sudden cardiac death. ECG changes during fire drills in a simulator were examined. Methods: 36 users of SCBA (Volunteer Fire Department, age 25.2 years; height 180.6 cm; weight 81.2 kg; BMI 25.4 kg/m^2) were selected for the experiments. All had valid certificates of health (G26/3). Participants had to complete a standardized fire fighting scenario (average time: 20.4 min) in the training center of the State Fire Academy, Baden-Wuerttemberg, Germany. The protective gear/SCBA weighed an average of 25 kg. Using an ECG device (Reynolds Medical), the electrical activity (II, V1, V5) of the heart was traced while fire fighting. Maximal heart rate, ST-changes, cardiac arrhythmias were monitored. Results: An average of 4944 QRS complexes were analyzed. Average maximal heart rate during the drills was 186 beats/min. Nine participants (25%) exceeded the personal maximal heart rate – defined as 220 beats/min minus age – by an average of 5 beats (0-11) per minute. Firemen reached an average of 95.4% (84.7-105.9%) of their personal maximal heart rates. The optimal training heart rate, used for endurance athletes and defined as 75% of the maximal heart rate, averaged 147 (141-152) beats/min for the collective. All participants exceeded this optimal heart rate for an average of 21.9 (17.7-31.9) minutes. No ST-changes were observed. Three participants showed supraventricular extrasystoles (2-15). One showed a bigeminus period (34 VES). Conclusion: Firemen wearing SCBA reach critically high heart rates during simulated fire fighting drills. In real-life working situations in the field with unknown conditions and increased fear, one can expect an even more intense reaction to the stress. Fire Engines in Germany should be equipped with AEDs for drills and real-life situations, Firemen should receive medical training..

THE EVALUATION OF THE PREHOSPITAL EMERGENCY CARE ON THE SCENE AND DURING THE AMBULANCE DRIVE

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Objective: To evaluate the appropriateness of the ambulance procedures and interventions performed in the management of the patients dispatched to the emergency department (ED). Methods: The study was conducted in the EDs of two urban community hospitals in Izmir, between October 10th and December 1st, 2001. A total of 81 patients brought into the emergency department via ambulances were enrolled. Demographic data, use of trauma board, cervical collar, emergent problems regarding airway patency, breathing and circulation coupled with procedures undertaken to fix them were recorded by paramedic trainees in both EDs. Data were analyzed using paired t-test and ANOVA. Results: The age range of the subjects was 4 to 89 and mean age +/- SD was 47.54 +/- 2.36. Male-to-female ratio was 1.57. Airway maneuvers were only done in patients with airway and breathing problems (p=0.000). IV fluid infusion was not significantly related to the presence of circulatory impairment (p=0.053). Findings in 23 patients prompted utilization of trauma board and cervical collar, though only 9 trauma cases (39.1%) were on trauma board and 6 (26.1%) wore cervical collar. Conclusion: Basic procedures applied to patients brought into the emergency department via ambulances appear to be far from satisfactory. In-service education of the medical staff in ambulances should be reemphasized.

THE USE OF EXTERNAL PACING ELECTRODES FOR UNSYNCHRONIZED CARDIOVERSION (DEFIBRILLATION) IN PATIENTS WITH VENTRICULAR FIBRILLATION AND PULSELESS VENTRICULAR TACHYCARDIA

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The initial treatment for ventricular fibrillation and pulseless ventricular tachycardia is defibrillation. During the defibrillation, any kind of contact between the rescuer and the patient can cause ventricular fibrillation or burns. The chance of coming in touch with the patient becomes greater when the procedure takes place in narrow places (or spaces) or in humid environment. The initial target during the performance of defibrillation is the security of the rescuer. The aim is to study a system of electric current delivery with the best effect on the patient and the maximum security of the rescuer, in conditions where approaching the patient makes the defibrillation dangerous for the rescuer. Material and Methods: We studied twenty patients with ventricular fibrillation - pulseless ventricular tachycardia. These mortal arrhythmias were either the first electrocardiographic finding or presented during advanced life support. The advanced life support was done by a doctor and two paramedics, based on the protocols of the European Resuscitation Council (ERC). In all cases there was either lack of space or humid environment. The defibrillation was performed with the external pacing electrodes of the Hewlett-Packard monitor. It's worth to notice that the defibrillation was performed from the distance of at least one-meter. Results: Four patients regained automatic circulation and showed complete neurological resuscitation after being hospitalized in Intensive Care Unit. Ten patients regained automatic circulation but died later in the Intensive Care Unit. The rest died during the resuscitation time. Conclusions: The use of external pacing electrodes is safe for defibrillation in conditions where the security of the rescuers is in danger. The poor outcome of the patients can be possibly attributed to other factors (condition of the myocardium, time of life support onset) and not to the insufficient defibrillation.

COMPARATIVE STUDY OF ONDANSETRON

VERSUS METOCLOPRAMIDE FOR PROPHYLAXIS OF NAUSEA AND VOMITING IN PREHOSPITAL CARE

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Background and aim of the study: The incidence of nausea and vomiting is a common medical problem. In daily clinical practice, effective prevention of these factors is an unsolved issue until now. In prehospital medicine it is far more important to prevent a symptom than to treat it. Factors like pain, anxiety, use of drugs and the transfer with ambulance, increase their incidence. Aim of this study was to compare the effects of two different antiemetic regimens, metoclopramide and ondansetron, on patient nausea and vomiting. Materials and methods. We studied 100 patients, 18-70 years old, with cardiovascular emergencies, pulmonary emergencies and emergencies from all the other systems. They received drugs according to their problem. All the patients were conscious and hemodynamic stable. The average time for transfer to the hospital was approximately thirty minutes. They were divided in two groups of 50 patients. Group A received metoclopramide, 10 mg intravenous (IV). Group B received ondansetron, 4 mg IV. Both groups received the antiemetic agent immediately after venous access. Nausea and vomiting was assessed by the use of emesis score. (no symptoms =1, nausea=2, vomiting: onfiltered=3, vomiting:twice=4, vomiting: 3 times or more=5). Emesis score was estimated 10 minutes after the first provide, 20 minutes after, and in the hospital. Patients with the same emesis score were compared. Patients who received phenothiazide, byturophenone, monoamine oxidase inhibitors, tricyclic antidepressants, patients with extrapyramidal symptoms or epilepsy and those with gastrointestinal obstruction were excluded. All the patients received supplemental oxygen during their transport. Results and discussion. The control of nausea and vomiting was sufficient enough in both groups, ($P < 0.05$). Conclusion: Metoclopramide is an effective antiemetic agent, but it has many side effects and restrictions of use. Ondansetron is a new agent with minimum side effects. It seems more preferable in prehospital medicine.

EMERGENCY PHYSICIAN´S DOCUMENTATION OF MECHANISM OF ACCIDENT: IMPORTANCE AND QUALITY

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Introduction: In Germany trauma plays a crucial role as far as causes of death are concerned. In addition to clinical investigations accident research helps to understand the relation between mechanism of accident and the resulting pattern of injury. The aim of this investigation was to evaluate the quality of information concerning the mechanism of accident provided by the preclinical physician. Furthermore the use of a photographic documentation on scene was evaluated. Methods: First the acceptance of the existing documentation concerning the mechanism of accident was evaluated. In two Level I Trauma Centers Emergency Physicians (EP) as well as Trauma Leaders (TL) were asked to complete a questionnaire anonymously. Results: 27 TL and 30 EP took part. None of the TL but 8 (28,6%) EP rated the written documentation as being "sufficient" (Fisher's exact test p=0,003). The oral documentation was rated "sufficient" by 5 (18,5%) TL and 14 (48,27%) EP (p=0,018). 25 MDs thought that an additional photographic documentation on scene would help to improve the documentation (43,9%, 95% CI 30,7-57,6%), another 30 MDs rated photographic documentation as being "probably helpful" (52,6%, 95% KI 38,9-66,0%). None answered "not helpful". There were no differences between TL and EP answers. 2 MDs did not answer this question. TL (mean 8,9; 95% CI 8,2-9,7) as well as EP (mean 8,8; 95% CI 8,2-9,4) thought exact information concerning the mechanism of accident for the initial clinical treatment to be important. Discussion: In spite of the fact that EP as well as TL know about the importance of the mechanism of accident there is still a lack of information as far as oral and written forms of documentation of this particular aspect are concerned. This implicates the need to revise the communication between the EP on scene and his clinical colleague. An additional photographic documentation on scene might be helpful.

THE EPIDEMIOLOGY OF ILLNESS AND INJURY AT THE ALPINE VENUES DURING THE SALT LAKE CITY 2002 WINTER OLYMPIC GAMES

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Background: The emergency medicine literature has described levels of medical care for mass gatherings in the United States (USA), including for the Los Angeles 1984 Summer and Calgary 1988 Winter Olympic Games. However, there is limited data to describe the type and number of illness or injury that may occur during mass gatherings in an alpine winter environment. Objective: To describe the epidemiology of illness and injury seen among spectators at the alpine and snowboarding venues during the Salt Lake City 2002 Winter Olympic Games. Methods: We conducted a retrospective review of the Salt Lake City 2002 Olympic Medical Care database for all patient encounters during the operational period of the Games at the alpine and snowboarding venues. The three venues included were: Deer Valley Resort (DVR), Park City Mountain Resort (PCM), and Snowbasin Resort (SBA). Each venue had a medical clinic for spectators and another for athletes located on site. Physicians, nurses, emergency medical technicians, and therapists staffed the clinics. The database was created by Salt Lake City 2002 Winter Olympics staff and consisted on descriptive reports of all patient encounters from all venues including demographic, epidemiology, and outcome information. Intermountain Health Care (IHC) in Salt Lake City maintains the database, and was the sole medical provider for the Games. Results: Each venue had at least six days of competition events. Over the 19 days of the Olympiad, a total of 377,609 spectators and 1,430 competitive athletes attended the three venues. 841 spectators were evaluated and treated at the venue clinics. The top five clinic diagnosis categories were: sprain/strain (n=108), miscellaneous trauma (n=103), respiratory (n=88), miscellaneous medical (n=69), and digestive (n=49). The most common nationalities evalu-

ated at the clinics were: USA, Canada, Norway, Japan, and Switzerland. Sixty patients required transport to a hospital for additional care: 27 required transfer by ground ambulance, one athlete required air transport, and the remainder were transported by private vehicle. Diagnoses at transfer included: musculoskeletal (34), cardiovascular (11), infectious (5), and other (10). Eight patients required hospitalization. Conclusion: The rate and acuity of patients seen at the alpine venues during the 2002 Winter Olympic Games was low. A judicious use of medical resources may be warranted during similar events.

IS COMPUTER BASED RESPONSE AND LOCALIZATION TECHNOLOGY APPROPRIATE FOR DEVELOPING EMERGENCY MEDICAL SYSTEMS? A PRE-EVALUATION STUDY

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Objective: The aim the study is to evaluate emergency medical calls to EMS dispatch center and determine the percentage of the visible telephone numbers (caller ID) before adapting new technology to our city EMS system. Method: The study was conducted for a week period in June 2003. Software was added to EMS dispatch computers to categorize the calls by operator, and to evaluate of dissociation of visible telephone numbers on these categories. Descriptive tests and Pearson Chi-square were used for statistical analyses. Results: 22,008 consecutive calls were recorded during the study period. 203 (0.9%) calls were described as necessary. 9825 (44.6%) calls were inappropriate, and 11.179 (50.8%) calls were categorized as unnecessary. Only 3995 (18.2%) calls' telephone numbers were visualized by system. Percentage of invisible telephone numbers' calls were 84.6% and 25.2% for inappropriate and unnecessary, and necessary calls, respectively (p=3D0.000). Conclusion: The EMS system is not using appropriately by public. Phone numbers could be disappeared by callers by using clip-clear option in unnecessary and inappropriate calls. Cities which want to apply these systems to their EMS facilities should evaluate city digital telephone system for its adequacy, and determine their calls' appropriateness.

AMBULANCE RESCUE SERVICE IN PRAGUE, THE CAPITAL OF THE CZECH REPUBLIC

Knor J

Ambulance Service of Prague

The Prague Ambulance Rescue Service was founded in 1857 and is the oldest organization of its kind in the whole of the Czech Republic. The organization, which was originally voluntary and more of a charity, has envolved into a modern and highly professional organization. By size, number of call-outs, and patients treated, it has no rival in the Czech Republic- between 220 and 250 call-outs a day following emergency calls, i.e. approximately 20% of all call-outs in the Czech Republic. This is caused by number of potential patients (1,2 million inhabitants, equal to 12% of the whole population of the Czech Republic) and to the state of the Prague population: a higher average age, the traffic situation in the city (i.e. a higher accident rate), the large number of drug addicts, rising crime, etc. The system of providing emergency first aid relies on the presence of a doctor in the call-out groups. Eight doctors are ready round the clock for call-out in emergency medical aid groups- their work is organized into a meeting (rendez-vous) system. This system uses doctors for the most serious cases and means of relatively few number are need on duty at any one time. This system includes also another 15 to 18 call-out groups of rapid response medical aid- each crew has at least one employee at a secondary health college. We can demonstrate the quality of EMS in Prague on two life- threatening situations. The first is group of cardiac arrests out of hospital the second one hard injuries. We have evaluated our effort in cases of cardiac arrests since October 2002 to June 2003 according to Utstein Protocol including call reception. Telephone pre-arrival instructions were provided to the bystanders till first response unit reaches the scene. In this period EMS of Prague performed 313 CPR. Time on scene is in average 8 minutes. The best cerebral outcome score we have reached in 33 cases that means 10,5% (according to CPC 1-2- no or low neurological disability). Hard injury are mourn symptom of new age. We also want to demonstrate data evaluated since April to June 2003 concerning hard injuries in the capital Prague. Almost two hundred injuried patients with NACA 4 and more were in life threatening situation during this period. Almost one fourth of them died before reaching the first response unit to scene of accident. The rest of them were treated and transported to the hospitals, most of them to the trauma centres. The first MEES on the spot was compared with surviving of each patient. In accordance with the functioning of the Integrated Rescue System the Prague Ambulance Rescue Service has drawn up a Traumatology Plan. The Traumatology Plan is an internal regulation laying down the procedure to be followed by the organization´s employees in cases of expected or confirmed multiple accidents, i.e. in cases where ten or more persons require medical attention. The Traumatology Plan is activated if there is a realistic expectation or certainty that a multiple accident has occured. The level of activation depends on the estimated number of injured, sick, or afflicted at the site of the multiple accident.

ANALYSIS OF MEDICAL ATTENDANCE BY THE TEAMS OF EMERGENCIES OF BISCAY TO NONAGENARIAN AND CENTENARY PATIENTS

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Introduction: At present according to information of the Basque Institute of Statistics in the province of Biscay there exists 4395 individuals greater than 90 years old. Objective: To analyze the medical attendance by the Teams of Emergency (TE) in ICU-mobile on the population composed by nonagenarians and centenaries in the province of Biscay. Methods: A retrospective, descriptive and transverse study of all the activations of the TE during the period between 1999 and 2003. Results: In the analyzed period the TE attended to 541 90-year-old or more patients. The middle ages were 92,68 (ó3,13) years. 135 (24,95 %) were men and 406 (75,04 %) women. The mobilization of the TE was higher in the urban zone that in the rural zone. The motive of consultation that produced higher activation of the TE was for being unconscious (36,78 %) followed by difficulty in breathing (25,87 %) and thoracic

pain (14,97 %). Diagnosis more frequent were: cardiorespiratory arrest (CA) in 104 occasions (19,22 %), syncope in 86 occasions (15,89 %), acute oedema of lung in 67 occasions (12,38 %), cerebro-vascular accident in 67 occasions (12,38 %) and coronary acute syndrome in 52 cases (9,61 %). In 32 cases (5,91 %) was not objectived urgent pathology. The most practised therapeutic measurement was the application of oxygen followed by the establishment of intravenous line. Least practised were cardiopulmonary resuscitation and orotraqueal intubation. A total of 246 patients (45,47 %) was moved to a hospital center. Conclusions: Next decade will undoubtedly be marked by the phenomenon of the aging.

THE EMERGENCY DEPARTMENT AS A MARITIME MEDICAL ADVISORY CENTER

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Introduction Article 6 of E.U. directive 92/29/EEC concerns the provision by each member state, of at least one centre that offers radio medical advice to people on board vessels at sea. The emergency department at Cork University Hospital is designated as the Irish National Maritime Tele-Medical Assistance Service. The service commenced in August 2001. Materials and Methods This paper describes the facilities and protocols put in place to enable communication and consultation, staff training to date, and the epidemiology of the first 54 patients dealt with by the service. Results Ten medical and nursing staff has been trained in personal sea survival techniques. Fourteen of the Emergency Department staff members have received training in Radio Telephony and Communications. There were 54 consultations between August 2001 and June 2003. These included calls from a number of sources: Trawlers 44 (81.5%), Yachts 3 (5.55%), Diving Related 2 (3.7%), Military Vessels 2 (3.7%), Lighthouse 1 (1.85%), Oil Rig 1 (1.85%), Patient Enquiry 1 (1.85%). This paper describes and analyses these consultations. Conclusions Emergency departments and those working in emergency medicine have the knowledge base, skills and flexibility to extend our roles and enhance our presence in the prehospital environment. We can make significant contributions to patient care working in the arena of Tele-medical advice. Cork University Hospital emergency department is now functioning as the National Maritime Tele-Medical Assistance Service for Ireland.

STUDY OF THE AQUATIC INCIDENTS HAPPENED IN THE BASQUE COUNTRY DURING THE YEAR 2002

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The Basque Country (CAV) has a coastline of 176 Km as well as navigable rivers and estuaries. Due to these geographic characteristics, there is a close relationship between the population and the aquatic environment: activity in the docks, fishing, water sports, walking along the seaside... That's the reason why those incidents happening in the aquatic environment do not surprise the extra-hospitalary services, although they are special incidents owing to the environment in which they take place and to the number of resources they involve. Objectives: General objectives: analysis of the aquatic incidents happened in the Basque Country (CAV) during the year 2002. Specific objectives: · To examine the rescue means used in these incidents. · To study the performance of the Emergency Teams (EE) in the aquatic environment incidents. Methodology: Analysis of the aquatic incidents collected in the Coordination Centre SOS DEIAK 112 (CC SOS DEIAK 112), during the year 2002 in the CAV. (We consider aquatic incidents those which happen in open sea, on the sea shore, in rivers, estuaries, reservoirs and marshes). · Variables study: time, location, resources that take part, victims involved, injury mechanism, EE performance. · Bibliographic revision. Results: During the year 2002 the CC SOS DEIAK of the Basque Country (CAV) coordinated 98039 sanitary performances out of which 85 were aquatic incidents (0,08%). The resources mobilised were: Sanitary teams (94,5%), Red Cross of the Sea (47%), fire-fighters (33%), public safety patrols (29,5%), helicopters unit (14,1%), mountain and diving mobile rescue team (17,6%), intervention service of the head of the emergency assistance (14,1%), first aid posts on beaches (7%), fishermen associations, town halls and local police. In the year 2002, the EE took part in 13033 incidents, 33 of which were aquatic ones (0,25%). In the latter, they assisted 29 victims (26,8%) and moved 14 victims (12,9%). The injury mechanism was accidental in 86 victims (79,8%) and 11 victims (10,1%) due to an illness. Conclusions: Although the resources taking part in aquatic incidents are large and varied, the sanitary ones stand out. Nowadays, the EE rarely come up against these kind of incidents, but, in future, they are likely to increase due to a change in the play-sport activities of our society. Therefore, we must encourage the cooperation between the services that take part in order to be able to rescue and guarantee the life of the victim in the hospitable aquatic environment.

PREHOSPITAL CARE IN THE KINGDOM OF BAHRAIN

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The kingdom of Bahrain is a group of 33 islands in the Arabian Gulf with an area of 660sq-km. The population of Bahrain is 630.000. There are two types of health services in the country: government and private. The government health care, which covers all the citizens, is free of charge where the private is a fee for service. At this time there is no formal Prehospital care system, but only certain elements of the prehospital care system ie manpower, ambulances. The current minister of health is determined to take the current services into the future and run parallel to any international standard. Analyses of the Pre-Hospital care system in Bahrain: 1- There is no legislation. 2- There is no medical control. 3- Manpower: The ministry of health recruits nurses and gives them basic training in CPR, IV therapy, Splinting and certain drug administration. This is done under the supervision of the EMT supervisor. Public safety personnel such as police and fire fighters are not involved in the prehospital care service. The same applies for citizen's involvement. This is mainly due to lack of a policy that mandated that these should be trained in BLS. 4- Training: The recruited nurses that man the ambulance services do not undergo a formal recognized EMT training program. They are trained in some pre-hospital techniques such as CPR and IV line initiation. There is no broad

training of the public or other public safety personnel in CPR and first aid. 5-Communication: There is a universal 999-access number. Each call is received at the police fort (Central) and then redirected according to the type of emergency. For example, Medical emergencies are directed to the hospital. Those who receive the call at the hospital are not trained, qualified and certified dispatchers, they are merely technicians that: a- Receive a call b- Take the address c- Send and ambulance unit These technicians do not: A-keep the line open with the caller for guidance and CPR. B-the caller remains out of contact until the care provider arrives. C-the dispatchers have no formal training in dispatching D-there is no priority codes to be assigned for each call. E-there is no online medical control 6-Transportation: The main method of transportation is by land. There are no air or sea ambulances. There are 14 functioning ambulances; these ambulances meet the international standards in terms of: A-ample space for CPR B-ample equipment. 7- Facilities : There are five major hospitals in the country that will be able to provide emergency care round the clock .Two government hospitals and three private hospitals. There is no standard categorization or designation of hospitals, such as a trauma center, neurosurgical ICU etc; we do have a burn unit. 8- Critical care units: There are two ICUs in the country with the capacity of 20 beds. There is no trauma center. We do have a Cardiac center. There are no interfaculty transport teams. 9- Public safety agencies: Public safety agencies are not directly involved in the provision of prehospital care. 10- Consumer participation: The public has no input into the EMS organization. The public lacks the proper guidance for the use of Prehospital care services. The public is not widely trained in CPR and first aid. 11- Transfer of care: Transfer of patients is possible from one facility to another. There are no protocols to guide the process. Since the EMT lacks the necessary training to guarantee a safe transfer, then safety during transfer is at question. 12- Standard patient record: There is a standard medical record used by the EMT. It is very poorly organized. It lacks the necessary documentation for studies regarding cardiac arrest and trauma. 13- Public information and education: Public is able to access 999, buy is not well informed about the emergencies and their recognition. 14- Independent review and evaluation: A-There is no ongoing review or evaluation of the Prehospital care system. B-There is no monitoring of radio communication. C-There is no review of response time. D-There is no review of runsheet. E-There is no outcome studies of cardiac arrest and multiple traumas. F-There is no physician input into the Prehospital care system. G-There is no EMS medical director. 15- Disaster linkage: A-There is a written disaster plan. B-drills are practiced once-twice a year mainly with the airport (Crash) C-No directs communication between potential disaster sights and the EMS. 16- Mutual aid agreements: There are no written agreements with neighboring facilities and neighboring countries. 17- Medical control: A-There is no physician input in the prehospital care service. B-There is no physician surveillance. C-There is no medical control: direct or indirect. The following summarizes the minimum required in order to develop an appropriate prehospital care service and hence an EMS. 1- THE LEGISLATIVE ISSUE: There should be a clear legislation from The Ministry of Health and preferably from the Prime Minister office that documents the need for such a system and recognizes it as a basic right for the residents of Bahrain. The legislation also should establish what level of E.M.S i.e. wants to implement in the country i.e.; basic, intermediate or advanced. 2- MANPOWER: This part will be made of three basic units: A-Doctors. b-Nurses c-Emergency medical Technicians. 3- TRAINING: All manpower should be trained in: a-BLS and CPR b-A.C.L.s (Advanced Cardiac Life support) c-A.T.L.S (Advanced trauma life support) 4-EQUIPMENTS: Unification of devices is very important, It is recommended: A-To have an AUTOMATIC EXTERNAL DEFIBRILATOR that is simple to operate, Long life Battery, Portable (e.g.: the last version of Zoll A.E.D. The new version of the ZOLL A.E. D full fills these criteria. We should have one in each ward, clinic, and center that is operated by E.M.S personnel. Also this device should be available in areas of mass gathering, like camps etc. (Defibrillation is the Treatment of choice for V-FIB cardiac arrest, which is the most common initial rhythm in cardiac arrest. B-Unify our Monitor devices: The device should be compact device that is a: PORTABLE, COMPREHENSIVE MONITOR AND DEFIBRILATOR AT THE SAME TIME. C-CRASH-CART: We will unify our CRASH CARTS based on the recommendations of THE AMERICAN HEART ASSOCIATION AND THE AMERICAN COLLEGE OF EMERGENCY PHYSICIANS. 4- COMMUNICATION: This is one of the major problems in any E.M.S and should be dealt with promptly: a-Pager System. b-Over head calling. c-Reliable Mobile Phone System. d-Others 6-MEDICAL CONTROL AND RESEARCH: A-We have to modify a new Run sheet form that will be used in each time the E.M.S is activated. This form will be based on the UTESTEIN study. This form will give us the Ability to extrapolate data for research as well as monitor our E.M.S response and outcome. B-There should be Medical Control on Line and off line. This task should be assigned to An Emergency Physician that is qualified and will be able to Establish protocols for the E.M.S as well as monitor the services and provide critique and research. 7-CENTER: We should have a center for training and C.M.E. I believe both S.M.C and the B.D.F (Bahrain Defense force hospital) should coordinate their efforts toward improving the skills of all of those that are involved in the E.M.S. In conclusion Bahrain with it's new leader ship and the current Minister of health are moving the right way and taking the proper steps towards improving the EMS in the Kingdom. People who think that there is no place for improvement will fill this path with reluctance and obstacles. It is our wish and hope that these obstacles will deter us from achieving a better EMS that will at the end improve the health care provided to the citizens of this country.

CAN CELLULAR PHONES MISLEAD US?

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Cellular phones are commonly used and lots of people don't realise that they can cause electromagnetic interference (EMI). We present a case that proves that diagnostic tools are not immune for EMI from a cellular phone. A 77-year-old man was brought to our Emergency Department for multiple falls with a short loss of consciousness over the last days. There were no prodromes and after a few minutes he always recovered fully without any intervention. A routine 12 lead ECG (Marquette MAC 1200) revealed irregular, broad complexes that could be interpreted as a ventricular fibrillation or torsades de pointes. As the patient was fully conscious with a strong and regular radialis pulse and without tremor or chills a registration error was suspected. Electrodes, connections, power supply and recorder settings were checked but the suspect trace persisted on new recordings. One of the patient's children, accompanying him in the examination room, mentioned that she had a cellular phone in stand-by modus in her purse, approximately 1 meter from the ECG recorder. Another ECG recording after the phone was switched of revealed a sinus

rythm with a right bundle branch block. Experimental interference of cellular phones and ECG recordings is described in the literature. Most hospitals advise their visitors not to use cellular phones inside the building but this is frequently misinterpret as "don't make a call". Cellular phones became so evident that one even could forget that they have one on stand-by with them. The public underestimates the EMI in stand-by modus and the signs used at the hospital entrances should stress the need to turn the phone off. Especially at the Emergency Department, where the family is allowed nearby the patient during investigations, EMI from a cellular phone could lead to misdiagnosis and even inappropriate, dangerous therapeutic actions.

WHAT DO WE THINK ABOUT OUR PREHOSPITAL SYSTEM?

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Introduction/Aim: Our national prehospital system exists since 1981. Recently it has been improved with the implementation of 20 emergency vehicles (VMER), with a team constituted by a nurse and a medical doctor. This paper aims to present the opinion that the population has about the existent prehospital system and what they know about it. Material and methods: The study consisted on a questionnaire answered by 160 persons, randomly selected, of the region of Leiria. The median age of our population study was 36,5±15,0 years old. There were 88 males and 72 females. The questions were:

1- Which is the national number of emergency;
2- When you call 112 you are calling for a) Police, b) Fire department, c) CODU, d) VMER, e) Civil Protection, f) Do not know;
3- Do you think that the service offered by the VMER is a) Very important, b) Important, c) Little important d) Not important;
4- Do you think that it is important that a nurse and a medical doctor go towards the victim a) Yes, b) No;
5- Do you think that the time take to arrive near the victim is a) Very good, b) Good, c) Reasonable, d) Bad, e) Very bad, f) Do not know
6- How do you consider the assistant care performed by the VMER's team a) Very good, b) Good, c) Reasonable, d) Bad, e) Very bad, f) Do not know

Results: 136 (85%) knew the national emergency number. 44% of people answered f) to the question 1 and only 13 (8%) knew the right answer (c- CODU) to the question 2. 111 persons considered that the service offered by the VMER is very important and 100% thinks it is important that a VMER's team go towards the victim. 110 persons (69%) answered Good or Very good to question 5 and 58% considered the assistant care performed good or very good. Comments- There is still a lack of information about how the system works, and public information is warranted. All the persons agreed that it is important that a medical team goes toward the victim and the majority of the studied population are pleased with the assistance performed.

THE COOPERATION BETWEEN CIVILIANS & ARMY IN EMERGENCY AID SERVICES IN TURKEY

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To supply emergency services within a rapid and efficient framework and to supply such services of good quality, the integration of our Emergency Ambulance System with the Country Health Administration has now been established under the organization of ' Ýzmir Regional Military Hospital' in the name 'Central Emergency Aid Station No.4 (AYÝ)'; and giving services since 05.02.2003, aiming to coordinate between other emergency services and also to preserve the coordination in catastrophic incidents. In this study, the emergency aid services that were performed by the station, which we have mentioned above, are retrospectively examined after the arrangements that were made by 112 Emergency Aid Center, between the dates 05.02.2003 - 10.07.2003. Furthermore, the number of daily events, the average time to reach the events, the distribution of events according to their social securities, the distribution of events according to which hospital they arrived at, the distribution of events in respect of their results and the distribution of events according to the way that they happened, are all analysed. As a result, this cooperation between civilians & army is applied for the first time in our country. The integration of the Emergency Ambulance System with the '112 Emergency Aid Services' system, under the authority of Military Hospitals in Ýzmir resulted in logical results that has produced demographic data. Thanks to these data, emergency ambulance systems in major cities can now be handled in order; and all these data demonstrate how efficient, rapid and top quality emergency aid services will take action.

THE PREDICTIVE VALUE OF THE INITIAL END TIDAL CARBON DIOXIDE BY QUANTITATIVE CAPNOGRAPHY, FOR THE RETURN OF SPONTANEOUS CIRCULATION IN ADULT NON-TRAUMATIC CARDIAC ARREST IN THE PRE-HOSPITAL SETTING

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The early identification of those patients in irreversible cardiac arrest could allow human and economic resources to be better allocated in the pre-hospital setting. The non-invasive measurement of end tidal carbon dioxide (ETCO2) can be used to monitor the effectiveness of cardiopulmonary resuscitation and the return of spontaneous circulation (ROSC) even before the detection of a palpable pulse. Measuring the average ETCO2 could also predict the ROSC but this is neither easy nor practical in the resuscitation situation and the optimal time for ETCO2 measurement is as yet unknown. A review of the relevant literature was performed to determine whether the initial ETCO2 measured by capnography could be used to predict the ROSC in adult non-traumatic cardiac arrest in the pre-hospital setting and the results of this search are presented here. After considering the findings of the current literature, we conclude that before quantitative capnography of the end tidal CO2 can be used as a reliable and sensitive predictor of return of spontaneous circulation in pre-hospital cardiac arrest, further studies need to be

performed. The end tidal CO2 is not by itself a sufficient criterion for terminating cardiopulmonary resuscitation, and should be used only in conjunction with other clinical prognostic information.

LIFE-THREATENING CHEST INJURY IN THE PREHOSPITAL MEDICINE

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Aim: The aim of the study is to investigate the cases of life-threatening chest injury focused on the emergency management. Material and methods: A retrospective analysis of cases with severe chest injury during a 2-year period (2001-2002) to the Department of Emergency Medical Services of Larissa in Greece. We reviewed 45 victims of severe chest trauma, aged 16-82 years, mean age 52.11 years. There were 27 males (60%). Medical records were reviewed for prehospital and emergency department data, and subsequent operative findings. Results: 41,(91.11%), cases are associated with blunt mechanisms of injury. There was a high incidence, 72%, of associated systems injuries. In 22 cases there was and associated CNS injury, in 17 soft tissue and skeletal and in 7 cases there was abdominal trauma. 5 patients had injuries of the heart and great vessels. Hemorrhagic shock was found in 32.1% of the cases and mean resuscitation volume applied in these cases was 1750+/-280ml. Hemato-pneumothorax was recognized prehospital in 62.2% and application of chest drain was performed in 10.4%. Endotracheal intubation and ventilation required in 52.55 of cases. In the majority of cases the mechanism of chest trauma is associated with transport and fall accidents on building site. Conclusion: A chest injury frequently is a signal of other serious injuries. During prehospital phase the recognition and prompt management of chest trauma leads to an earlier treatment of potentially life-threatening injuries.

ALTERNATIVE METHODS OF AIRWAY MANAGEMENT IN PREHOSPITAL MEDICINE

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Aim: To determine the ways of airway management in difficult intubation in the prehospital medicine. Material and methods: In this retrospective study we reviewed all cases required airway management over a 4-years period, (1998-2002), in a department of emergency prehospital medicine. Clinical data were obtained retrospectively from patients records kept in our department. Results: 212 patients required management of the airway due to different reasons. In 25 cases conventional secure of the airway was impossible. In 9 cases, which were in a small distance from the hospital, ventilation and oxygenation were performed with an oro- or naso-pharyngeal mask airway used in conjunction with bag and mask ventilation. In the other cases a laryngeal mask airway was used effectively. Success of intubation and ventilation with laryngeal mask airway was comparable to the conventional tracheal airway. Recorded time of insertion was shorter with the laryngeal mask versus conventional tracheal airway. Conclusion: Maintaining an airway and providing adequate ventilation and oxygenation to the critical ill patient can be challenging in the prehospital enviroment. The laryngeal mask airway proved to be effective alternative in providing oxygenation and ventilation in difficult intubation in the prehospital medicine.

NONTRAUMATIC STUPOR AND COMA IN THE PREHOSPITAL MEDICINE

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Background and Aim: Stupor and coma are signs of "brain failure" and must be treated emergently in an effort to prevent or minimize irreversible central nervous system injury. The aim of this study was to investigate the cases of acute onset stupor and coma in the prehospital medicine focused to the emergency stabilization. Material and methods: Data were extracted from the medical records of patients presenting over a 4-year period, (1998-2002), to the Department of Emergency Medical Services of Larissa in Greece. In this retrospective study we reviewed 211 patients presenting a stupor or coma of acute onset. There were 123 males and 88 females. The mean age of the patients were 47.47+/-25.90 years. Results: The initial GCS of the patients was 9+/-3. The causes of stupor and coma are: 54 cases had cerebrovascular disease, 32 drug intoxication, 29 post seizure,15 cases electrolyte abnormalities, 14 hypercapnia, 9 infection, 9 cases had hypoglycemia, 9 diabetic ketoacidosis, 8 uremia, and in 32 cases the cause of coma remained unknown. There was a history of previous episode in 56 cases. in 65 cases there is not any medical history. Conclusion: In the emergency care setting, any acute alteration of consciousness represents significant neurologic dysfunction and must be regarded as a life-threatening emergency. The goals of management of the acute alterations in consciousness in the prehospital medicine are three fold: 1. prevent secondary hypoxic ischemic brain injury 2. prevent herniation 3. diagnose and treat, if possible, the underlying cause of coma. Important is the high index of suspicion of treatable cases especially if there is not any previous medical history.

FAILED PREHOSPITAL INTUBATIONS IN A MEDICAL BASED EMERGENCY SYSTEM

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Aim: In the prehospital field the conventional airway establishment is not successful in all cases. The aim of this study was to investigate the reasons for failed endotrachial intubations in relations with the subsequent management in the emergency department. Material and methods: In this retrospective study data were collected from 1998 to 2002 in a medical based emergency prehospital system in an area of 300.000 citizens. The patients who needed endotracheal intubation were included in the study. Results: We collected the data of patients required endotracheal intubation during the past 4 years. 6 physicians of different specialties had worked during this time period. 212 patients needed endotracheal intubation among 8527 patients contacts. 25 cases failed field conventional endotrachial intubation. Anaesthesiologists had the higher index of successful intubation, 98.3% versus 94.2% in the other specialties. Successful endotracheal intubation was

achieved in the emergency department in 18 cases. The reasons for the unsuccessful prehospital intubation was difficult anatomy in 9 cases and inadequate relaxation in the rest of the cases. Conclusion: The prehospital medicine in Greece is carried out by physicians of different specialties. All of them are trained in the prehospital medicine and in emergency endotracheal intubation. Prehospital intubation failures result from a variety of factors. A fraction of failed field endotracheal intubations may have resulted from inadequate operator experience. Only a small percentage of field patients were truly difficult and required advanced resources in the emergency department to facilitate airway management.

EMERGENCY ON BATTLEFIELD

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The Authors propose application of ABC and PHTLS techniques during rescue on the battlefield. Present statistics on war injuries and compare military and civilian mass casualty situations and the triage in these scenarios.

INTER-HOSPITAL TRANSPORTS TO VITORIA DURING THE YEAR 2002

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Objective: To perform a detailed study of inter-hospital transports by the Alava's Emergency Unit to the reference hospital in said province during the year 2002. Specific Goals: Evaluation of medical centers which request inter-hospital transport, influence of date and time on the number of transports, diagnostic agreement between sender and receiver hospitals, and service in which the patient stays in the receiving hospital. Method: We examined our service's database and the patients' clinical history at the receiving hospital to examine our specific goal. Results: 239 transports were made, out of which 182 had Txagorritxu hospital as a destination and 57 went to Santiago Apóstol hospital. Sending centers were: Mondragón Hospital (130), Policlínica de Guipúzcoa (23), Cruces Hospital (3), Zumarraga hospital (3), Leza hospital (3), ad Baracaldo, Mendaro, Galdakano, and Miranda de Ebro hospitals (1 each). Within Vitoria, 52 were sent from Santiago Apóstol hospital and 21 from Txagorritxu hospital. As for date and time, February (28 transports) had the most transports, and September (14 transports) had the least. Thursdays had the most transports (45) while Saturdays had less transports (27 transports). The most common time for transports was 15:00 and 17:00, both times had a cumulative 23 transports each, while 5:00 was the least common time with only 1 transport. Both hospitals concluded the same diagnosis in 204 cases. 135 patients were admitted to the Intensive Care Unit (ICU), 10 admitted to cardiology with telemetry, 11 were transported for diagnostic tests, 8 underwent neurosurgery, 13 were released and 62 went to other areas. Conclusions: The main demanding center is Mondragón hospital; February and September are the busiest months. Thursdays are the busiest days, especially during the daytime. Out of 239 patients, only 145 (ICU and cardiology with telemetry) were monitored closely.

RETROSPECTIVE STUDY OF NON-TRAUMATICAL CPA IN VITORIA-GASTEIZ IN THE YEAR 2002

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Background: Revision of all cases of CPA and their study will help us correct possible errors and improve future actions. Goals: 1. Review of CPAs in our area with attention to the important demographic and clinical variables. Methods: We studied the register sheets' completion grade CPAs of non-toxic and non-traumatic origin in a population of 220,000, located in Vitoria-Gasteiz, taking note of the following: Demographics - date, age, gender, location, Arrest variables - witnessed (by the Local Emergency Unit or other sanitary personnel), previous CPR, initial rhythm seen by the Emergency unit, Clinical history -antecedents, treatment used, time of stay, and motive of call. Results: Of the 56 cases of CPA analyzed, 22% were successfully resuscitated (recovered). 10 cases occurred in the street, of which 50% recovered. 82% of the total cases were men. 40% of the women recovered. 40.5% of the calls stated unconsciousness, the remainder were divided between syncope, CPA, dyspnea, and acute heart attack. 75% of the register sheets were filled in perfectly. 53.5% of the CPAs occurred in low or middle-low class zones. 27% of the CPAs received basic CPR before the arrival of the Emergency Unit from other sanitary personnel. Of them, 46.6% recovered. Conclusions: 1. 22% of the CPAs were recovered. 2. The most frequent location of CPA is a low social class home. 3. The highest percentage of recoveries happened after receiving basic CPR 4.The percentage of recovered cases goes up to 66% when an AED (Automatic External Defibrillator) was available. 5. The usefulness of improving the basic units and their use of AED is confirmed. The quantity of CPAs in men is relevant, as is the fact that the ones that happen on the street are more likely to be recovered. Also important is the frequency of calls reporting unconsciousness, and the percentage of cases in economically less fortunate zones. Last but not least, we noted a high percentage of CPR recoveries and complete register sheets.

ACCURACY OF RESPIRATORY RATE ESTIMATES MADE BY AMBULANCE STAFF

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Background and objective: The respiratory rate (RR) is, along with heart rate and blood pressure, a component of the Triage - Revised Trauma Score (T-RTS), a fundamental part of the triage assessment – both in the prehospital setting and in the emergency department. However, in many cases the RR is not recorded, which at worst might lead to undertriage of seriously ill patients. It is our hypothesis that estimates, rather than exact measurements, will increase the recording of the RR. The aim of this study is therefore to determine the ability of the ambulance staff to make estimates of the RR according to the T-RTS. Methods: The ambulance staff on call estimated the RR of the patient, and at the same time the RR was counted for one full minute by an observer who was

blinded to the estimates of the ambulance staff. One of two trained observers was present for all cases enrolled during the study. The estimates and measurements were classified into one of five groups in the T-RTS: 0 (RR=0); 1 (RR=1-5); 2 (RR=6-9), 3 (RR>29); 4 (RR=10-29). Groups 0-3 were considered to contain abnormal RRs and group 4 the normal RR range. Results: To date we have results from 68 ambulance runs, involving 20 different members of the ambulance staff. Comparing the estimates and the observer measurements, agreement was found in 53 of the 56 cases with a normal RR and in 8 of the 12 with abnormal RRs. This leads to a negative predictive value of 93% and a positive predictive value of 73% respectively. This, however, conceals the fact that one single member of the ambulance staff accounted for 3 of the 7 disagreements. Conclusion: The results of this ongoing study is that the ability of the ambulance staff to estimate patients' respiratory rate using the T-RTS is quite accurate when it comes to detecting a RR in the normal range, but less accurate when the RR is abnormal. More observations are necessary for a final conclusion.

TIME RESPONDING IN MEDICAL UNITS (EU) IN AREA OF ATHENS. PRELIMINARY DATA & CONCLUSIONS

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Aim: To record the duration of time that medical-unit (EU) needs to respond to every emergency call throughout Athens.(preliminary data) conclusions and suggestions to improve the National EMS. Material-Methods: Data from the work of one medical unit, randomly selected, 100 and more cases during a period of 8 eight months. The following data were recorded: Time of the day that the telephone call took place. Time the emergency call was transmitted by wireless system to the medical unit. Time that the EU arrived at the place of the case, time that the unit spent at place in controlling the patient and time the unit take the patient time the unit arrive in ED (emergency department), time that spent the EU in the ED till the patient safely delivered, all the duration between these times, triage and characterization of all the cases according to the doctor of the unit. All the data collected was analyzed in order to understand time needed for the EU to respond. Results: 106 cases were recorded and the data collected: Kind of: Pathology 52 (49%), cardiology 28 (26%), trauma 26 (25%), Part of the day: Day-time: 80 (76%), night-time: 26 (24%), Need of EU: EU necessary 20(19%); EU unnecessary 86 (81%). Mean SD Min Max Time needed from call to transmitted 24.57min 15.33min 4 70. Time needed from transmitted to arrival 18.06min 13.65min 4 69. Time needed to collect the patient 14.41min 10.92min 0* 45. Time needed from collection to delivery in ED 22.43min 15.66min 0* 64. Time spent in ED 25.88min 15.2min 0 71 (* the patient was not collect from the EU). Discriminate the cases in day or night calls there a difference in response time for the EU, which is statistically significant ($p<0.05$) Time needed from transmitted to arrival (day time) 18.76min 14.23min 4 70. Time needed from transmitted to arrival (night time) 9.46min 4.22min 4 19. Conclusions: Time the EU needs to respond to the EC (emergency call) judged to be ineffective during night and particularly during day time. Efforts should be done to improve response time in emergency calls and in multi varied factors. First to educate bystanders to support first aid, second to improve traffic situations in our town, third dispersion EU in order to be closer to the case.

EAGLE'S SYNDROME IN PREHOSPITAL EMERGENCY MEDICAL SERVICE

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Objective: Eagle's syndrome consists of several symptoms (dysphagia, foreign body sensation, cervical pain, face pain, throat pain with radiation to the ipsilateral ear). Material-Methods: We present two cases of a 43 year old patient and a 58 year old patient with Eagle's syndrome, which was discovered in their medical records after spine injuries in traffic accidents. Discussion: Analysis on Eagle's syndrome is performed and current literature is reviewed.

FIRST RESPONSE TEAMS IN SMALL TOWNS AND RURAL AREAS IN MURES COUNTY

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Background: The Romanian pre-hospital emergency system is based on a nationally organized ambulance service. The ambulance services are mainly concentrated in urban areas and respond to rural areas from nearby cities and towns where distances may be as long as 30-40 km and response time over one hour. In our county, since 1990, a complimentary integrated system was created based on a direct collaboration between the emergency department and the fire department. Until 1999, the integrated system consisted of a mobile intensive care and rescue team with mixed firefighting and medical personnel headed by an emergency or intensive care physician. The role of this team was to respond to critical cases using an ambulance and in certain cases a helicopter. Still, the rural areas were not properly served. The frequency of cardiac arrest resuscitation and return of spontaneous circulation in Targu Mures city was 42% survival to hospital arrival and 17% to hospital discharge in contrast to a rural area, with long transport distances in which case return of spontaneous circulation was near to 0%. Method: Creation of fire department based first response teams with AEDs in rural areas and in small towns in our county. The teams would be financed by the local authorities and the Ministry of Interior and would have medical care coordinated directly by our mobile service under the emergency department. Results: We started implementing the FR teams in 1999, and now have 6 teams. The response times dropped in the areas served from over 30-60 minutes to under 15 minutes. We already have the first patient successfully resuscitated by a FR team using an AED (response time 3 minutes) before arrival of our MICU which had to drive for 25km. The patient was discharged from the hospital with an excellent neurological outcome. Conclusions: the combination between the highly qualified MICU team and the first response teams using firefighters trained as EMTs is a feasible solution for a county like ours. We present our results and the training program our firefighters undergo.

PERFORMANCE OF THE EMERGENCY TEAMS IN MARITIME INCIDENTS: SPECIAL CHARACTERISTICS

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Background: The Basque Country has a very rugged coastline, with cliffs and beaches that have difficult access. The emergency teams' performance is complicated by several peculiar factors in comparison to other emergencies. Objectives: General objectives: to analyze the special characteristics that may influence maritime incidents. Specific objectives: To estimate safety, and to describe the difficulties in access as well as the difficulties in rescue and evacuation. Methodology: 1- Analysis of the maritime incidents collected in the coordination centre (CC) during the year 2002. 2- Study of the variables: information, safety, access, sanitary performance, rescue and evacuation. 3- Bibliographic revision.4- Photographic material. Results: During the year 2002, several different types of maritime incidents occurred including sport incidents, accidents, and incidents on board. Since the initial gathered information is often confusing or incomplete, the coordination centre (CC) mobilizes the ground teams and later on, if necessary other resources (sea and/or ground resources) may be also called. The working scene is quite different from typical scenes and potentially very unsafe due to cliffs and heavy swells. Both, access and rescue is very complicated, due mainly to the orography, weather conditions, time of the accident, the severity of the wounds of the victim together with the transportation of the normally needed material and special equipment that increase the danger to the rescuers themselves. Conclusions: The performance of the professionals of emergencies in maritime incidents highlights very different challenges, particularly with regards to access, rescue and the performance itself. The unique characteristics of the maritime surroundings result in greater risks for both the victim and the rescuers.

ARBITRATION VS. LITIGATION CONTROVERSY IN RESOLVING HEALTH CARE DISPUTES, THE GOOD, THE BAD, AND THE UGLY — ANATOMY OF A RECENT UNITED STATES SUPREME COURT DECISION PACIFICARE VS. BOOK

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Arbitration or Alternative Dispute Resolution (ADR) is rapidly replacing litigation as the preferred means of resolving health care disputes. The Federal Judiciary has consistently upheld arbitration clauses in contracts under dispute, making arbitration mandatory before litigation. Arbitration clauses will soon be standard in all health care contracts. The inherent complexity of health care disputes favors innovative ADR over traditional litigation. The arbitration vs. litigation controversy has gained wider attention after recent higher court decisions. This year, a landmark settlement reached between Aetna and several medical groups, granted preliminary approval by US District Court Judge Moreno, provided for several alternatives to litigation including external review boards and facilitators. In a recent US Supreme Court decision, PacifiCare vs. Book, this controversy reached jurisprudential import. A group of physicians had sued several HMO's alleging conspiracy to prevent payment through automated systems. But relevant contracts contained arbitration clauses requiring disputes to be arbitrated, not litigated. The physicians argued that they could not obtain meaningful relief in arbitration, and won in lower court allowing them to bypass arbitration and initiate litigation. HMO's appealed, hoping to compel arbitration to prevent the doctors from obtaining treble damages under the Racketeering (RICO) statue. US Supreme Court ruled that the doctors must arbitrate rather than litigate; but opined that arbitrators could award damages according to their own discretion. Compelling arbitration and strengthening the hand of arbitrators, this decision heralds increasing judicial preference for arbitration in health care dispute resolution, given the advantages afforded including flexibility, confidentiality, privacy, and significant savings in time and expense, not to mention potentially obviating the emotional toll protracted litigation can exact on all concerned.

CONFLICT RESOLUTION IN THE EMERGENCY DEPARTMENT

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Conflicts of one sort or another occur in the day to day operations of any emergency department. While there are protocols for various situations, they may not cover everything, and they may not have been reviewed by management and staff in the light of new laws or public expectations. What does the physician in charge do in these situations? What are the pitfalls? What can one do proactively to make the handling of such cases easier in the future? The following article summarizes some important approaches to dealing with the inevitable conflict and crises in emergency medicine.

A 2020 VISION FOR COALITION HEALTH SERVICE SUPPORT

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Emerging concepts propose networked coalition medical support of NATO operations. By 2020, military health systems have been transformed, providing coalition medical capabilities integrated across the range of NATO operations. Collaborative research and development, integrated training, and coordinated combat developments; allow providers to integrate activities, markedly improving effectiveness and logistics efficiency. Ideas, prototypes, and solutions derive from, and are shared among all members and multiple industries (e.g. Logistics, information science, communications). Transformed NATO health service support enhances force health protection, reduces logistics requirements, and enables improved operational capabilities. The narrow, historic perspective wherein medical matters within NATO were regarded strictly as a national responsibility has been changed. By 2020, medical operations are fully interoperable. Medical personnel regularly train and deploy on the basis of operational require-

ments and capabilities, not solely nationality. Besides emerging concepts, new technologies transform coalition medical operations. Synthetic blood, fibrin bandages, and other advances reduce casualty rates. With secure signaling devices, calls for "Medic!" become automatic and friendly fire accidents are eliminated. Next generation personal protective devices reduce ballistic wounds, and agent detector-alarm systems are individual, not area-based. Satellite phones and telemedicine connect battle space medics with trauma centers. Medical response capabilities 'sense and respond' movement and treatment requirements. Holding patients at staging facilities is eliminated and patient evacuation, tactical and strategic, is fully integrated. By 2020, health service support is a coalition, not Service or national responsibility.

URGENTOLOGY: THE CONCEPTS OF EMERGENCY MEDICINE

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Introduction: Emergency Medicine is a young medical speciality. In France it is defined essentially by the place where it is practiced. This definition is insufficient to describe it. Method: Using the techniques of word development a neologism is proposed to name the emergency medicine. The principal criteria are the intelligibility of the word and its intuitive phonology in French as in English. A conceptual definition of this neologism is proposed from which an exhaustive description of emergency medicine will validate the concept. Results: Denomination. Having explored without success the loan and the semantic neologisms, a neologism of form is made starting from a Latin and a Greek root, and as our friends in Quebec : the word "urgentology" is proposed. Concepts of urgentology: The urgentology includes the urgency-request and the urgency-answer. This medical practice is characterized by a short period of time, being measured in hours and minutes. It transforms a non-programmed action into an organized activity. Validation. This short period of time results in the temporo-spatial proximity of emergency medicine what will be the model of urgentology, French Germanic or Anglo-Saxon. Urgentology is a high-efficiency medical speciality, the consequence of the simultaneity of the urgency-request and this period of time. The medical sorting is the corollary. The field of urgentology defines specific fields of competences for its medical and paramedical actors, the organization of the training in this speciality which includes the knowledge (medical reasoning), the knowledge to do (technical, tri) and the knowledge to be (relations and organisational competences).

PALLIATIVE CARE IN THE EMERGENCY DEPARTMENT: A CONTRADICTION?

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Introduction: Admission in the emergency department, and pre-hospital medical care by the Mobile Intensive Care Unit, MICU (SMUR and SAMU), of patients with an underlying palliative disease, seems to be a frequent but under-evaluated problem in literature. The aim of our study was to quantify and analyse, during four months, the patients admitted with a current palliative disease in the emergency department, or transported by MICU to our hospital. Methods: A registry was started during four months for all patients admitted with an underlying palliative disease in the emergency department. The collected datas were: mode of transport, origin of patients, purpose of admission, type of palliative underlying disease, follow-up of the patient and time spent in the emergency department. Results: Fifty patients were collected. Main results were: concerning the mode of transport, 48% of the patients were admitted per ambulance and 45 % by MICU. Origin of patients: 88% of patients were directly admitted from home, 8% from another hospital. Purpose of admission: 33% of the patients were admitted for neuro-psychological disorders, 22% for onset of respiratory symptoms, 20% for pain and 25% for others purpose. Type of palliative underlying disease: cancer for 70% of patients, neurologic disease for 20% of patients. Follow-up of the patient: 42% of the patients were hospitalized, 24% of patients return at home, 22% died, 4% were admitted in the palliative care unit and 8 % were admitted in another hospital. Conclusions: This preliminary study confirm the accuracy of this problem in the emergency care system, and necessitates further evaluation of the incidence and implications of these patients in our activity.

CLINICAL CHARACTERISTICS AND ONE YEAR SURVIVAL OF CANCER PATIENTS PRESENTING TO EMERGENCY DEPARTMENT

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Background: The Emergency Department (ED) assumes an important role in the diagnosis, treatment and even in screening of cancer patients. Objective: To define the characteristics of cancer patients presenting to our ED, to analyze newly diagnosed patients, and to determine the one-year survival of patients with oncology-related complaints. Methods: We conducted a retrospective data survey of adult patients referred to our 9 Eylül University-based ED between September 1st, 1996 and August 31st, 1997 with the disease code of malign neoplasm. Patient information regarding sex, age, time of referral, chief complaints, reported findings, treatment modalities, consultations, admission and survival were gathered from hospital registry, local health administration and KÝDEM (Center for Follow-up and Screening of Cancer), and by telephone survey. Results: We assessed data on 203 of 255 patients who visited our ED during the study period. The study group consisted of 174 patients of whom, 145 had been previously diagnosed as having cancer; 29 had received the diagnosis in the ED and verified thereafter. Data regarding 296 of 311 ED visits within the study period for these patients were reviewed and analyzed. These visits were classified as oncology-related (83.4%) and not oncology-related (16.6%). Mean number of ED visits were 1.71 (1.32 per capita). The mean age of cancer patients was higher than the mean age of the whole ED population within the period ($p<0.05$). Oncology-related visits took place more often on Monday and during the summer ($p<0.05$). The difference between the mean ED length of stay due to oncology-related complaints and not oncology-related complaints was not found to be statistically significant. On the other hand, cancer patients ED length of stay was significantly longer than the others in the ED. The distribution of the types of cancer patients in our study group

was similar to the distribution in Izmir. Among the oncology-related visits, pain was the most frequent complaint (31.6%). Anemia was the most prevalent finding in our study group (34%). The most common presentations that led to referral of 29 newly diagnosed patients in the ED were pain in 14 (48.3%), and dyspnea in 4 (13.8%) cases. Lung cancer was the most common type of neoplasm, not only in all ED cancer population, but also in the newly diagnosed cases. The study group consisted of patients with advanced stage cancer. Cases diagnosed in the distant stage were 12.69 times more likely to report oncology-related symptoms than cases with localized cancer and cases with regional cancer were 7.12 times more likely than localized cases. Fifty-eight per cent of patients with pain symptoms received analgesic medication in the ED. Eight of 11 cases with febrile neutropenia were administered antibiotics in the ED. Eighty-three per cent of patients with oncology-related symptoms died within one year after the ED visit. We found that patients with oncology-related symptoms, male sex and distant stage had significantly shorter survival times than the whole population. Cancer patients presented to EDs due to pain and dyspnea, which generally resulted from advanced disease. Emergency physicians become more acquainted with the evaluation of cancer patients as a result of the increase of visits due to side effects of the treatment and of the actual number of the cases. Managing these cases in the ED is a difficult process, and necessitates a great breadth of knowledge, often requiring access to medical records as a guide. Emergency physicians should have protocols shared with the relevant disciplines with regard to the management of commonly encountered problems of cancer patients.

PROGNOSTIC VALUE OF ANDROGENITY INDEX (AI) DETERMINATION FOR COMPLICATED STRESS ULCERATIONS OF THE DIGESTIVE TRACT IN MULTIPLE TRAUMA PATIENTS

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Objectives: The aim of the study was attempt to find correlation between the extent of adrenal steroid dysbalance and the incidence of complicated acute gastrointestinal ulcerations (AGIU) in patients with multiple trauma (MT). Methods: The consecutive 112 patients with severe (ISS>16) MT were enrolled into the study with following characteristics: mean age 44.1±7.5 years; 13.7% female; mean ISS 30.5±8.2. The patterns of adrenal androgens (mainly dehydroepiandrosteron (DHEA) and corticosteroids production with AI (DHEA/cortisol) determination were measured in daily urine by Norymbersky-Allen. The samples were obtained on 1,3,7,10 and 14th posttraumatic days. The AGIU complicated by bleeding or perforation were confirmed by endoscopy, autopsy or operative findings. The Spearman paired test was used for statystical analysis. Results: Out of all injured patients 59 (53%) developed AGIU that were complicated by bleeding (49%) and perforation (1.7%). The low and long-lasting (less 10 mg/day, more 7 days) levels of adrenal androgens metabolites in cases of gastrointestinal bleeding or perforation were revealed. The occurrence of AGIU apparently increased with the severity (ISS score) of MT (r=3D0.33, p<0.05). In parallel to ISS, the incidence of AGIU was mild correlated (r=3D0.30, p<0.05) with the decreasing AI too. But the occurrence and severity of complicated AGIU was strongly positive correlated only with decreased AI<0.30 owing to lack of DHEA level (r=3D0.68, p<0.05). Among patients with AI>0.3 only 6.2% developed AGIU. In contrast, patients with severe protracted steroid hypoandrogenity (AI<0.30 on 7th day) demonstrated stress ulceration in 84.5%. In these patients, no significant correlation (r=3D0.11, p<0.05) was found between the ISS and the incidence of GI bleedings or perforations. Conclusions: The low (<0.30) AI may be predictive for development of AGIU complications in patients with MT.

ABDOMINAL PAIN NEXT-DAY SCHEDULED REVISITS TO THE EMERGENCY DEPARTMENT: A DESCRIPTIVE STUDY

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Introduction: For abdominal pain patients with equivocal presentations, scheduled revisits to the ED within 24 hours may be an effective management strategy. OBJECTIVE: To describe the characteristics, outcomes, and lengths of stay (LOS) for scheduled abdominal pain revisits to the ED, and to describe the incidence of and factors associated with the noncompliant patient. Methods: This is a retrospective, cohort study conducted at a university hospital with an annual census of 45,000. Over a 6 month span, data regarding demographics, lengths of stay, diagnostic tests, and disposition were obtained for all patients discharged from the ED with non-specific abdominal pain who were asked to return within 24 hours. Results: Sixty patients were identified. Twenty-nine (48%) returned as instructed. This compliant group had an average age of 25, and 31% (9/29) were uninsured, 59% (17/29) were female, and 24% (7/29) were Caucasian. Thirty-one patients (52%) were noncompliant and did not return as instructed. These patients had an average age of 25, and 58% (18/31) were uninsured, 71% (22/31) were female, and 35% (11/31) were Caucasian. Lack of insurance and female sex were associated with noncompliance (p=0.035, p=0.005). Five patients received oral contrast abdominal CT scans on their followup visit, and only 1 patient was admitted. The LOS for the compliant group (both visits) was no different than the average LOS for a sample of patients who were discharged with nonspecific abdominal pain after a negative oral contrast CT scan (384 versus 381 minutes, 95% CI –100 to 107). Conclusions: Scheduled abdominal pain next day ED revisits can be an effective way of managing non-specific abdominal pain. Length of stay is not increased and patient discomfort is avoided as advanced imaging tests are deferred. However, uninsured and female patients are less likely to return as instructed and may need more advanced imaging on their initial visit.

ESOPHAGEAL PERFORATION: CHEST PAIN CAN BE THE FIRST COMPLAINT

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Introduction: Esophageal perforation is a potentially life-threatening condition that must be identified and treated early. Patients with upper esophageal perforation usually present

with neck or chest pain, dysphagia and lower esophageal perforation with pneumothorax and pneumomediastinum. Most common foreign bodies in adolescents and adults are food boluses and bones. Case Report: A 63 year old male presented to Emergency Department (ED) with chest and back pain. After swallowing a piece of meat he complained of chest pain. In the morning he came to ED he complained of blood coming from his mouth. His blood pressure was 100/80 mmHg, pulse rate 105 beats/min, respiratory rate 24/min and temperature 36 o C. On his ECG there wasn't evidence of ischemia. On chest x-ray widened mediastinum was seen. His WBC count was 20.000 and his serum chemistries were normal. After initial evaluation thorax CT was obtained. On the CT image there was a widened mediastinum and air density. At the subcarinal space there was 3x2x1 cm sharp edged foreign body density. After CT was reported he was taken to the operation room by General Surgery. Discussion: Esophageal perforation is potentially lethal if untreated. CT of the chest may be used and mediastinal air, extraluminal contrast, or fluid collections or abscesses adjacent to the esophagus confirm a perforation. Aortoesophageal fistula is a rare but fatal cause of upper gastrointestinal bleeding. Clinically there is medical chest pain, followed by arterial hematemesis. It is important to consider esophageal foreign bodies as factors in chest pain. Impacted sharp foreign bodies in the esophagus can be very difficult to manage and while removing perforation can occur. Conclusion: Patients coming to ED with complaint of chest pain, hemoptysis, hematemesis and history of foreign body ingestion must be evaluated carefully. Esophagial perforation must be recognized and treated immediately.

ABDOMINAL PAIN IN A PATIENT WITH CONGENITAL AFIBRINOGEMIA

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Congenital afibrinogenemia is a rare disorder transmitted through autosomal recessive inheritance. Clinically, patients may present with minor bleeding to severe hemorrhage. Case Discussion: A 25-year old female presented to the emergency department with lower quadrant pain for two days. The pain was constant and non-radiating and she described no aggravating and alleviating factors. There were no complaints of fever, dysuria or hematuria. She denied any trauma except water sports (she had been 'banana boating' two days before presentation). She described normal bowel movements without melena or hematochezia. She denied sexual activity. Her last menstrual cycle was 30 days ago. Vital signs were normal and she appeared to be in no acute distress. Bowel sounds were normal. The abdomen was soft with local tenderness in the left and right lower quadrants. No guarding, rebound, or mass was appreciated. Laboratory examination showed Hgb: 10.5 g/dl, Hct: 32 MCV: 91 fL, WBC: 10,100/mm3 and platelets: 261,000 /mm3. Urinalysis and pregnancy tests were negative. Abdominal ultrasound demonstrated a right ovarian cyst and intraabdominal fluid in Morison's, perihepatic and perisplenic areas. After 2 grams of fibrinogen administration, she was admitted for observation. She refused any surgical intervention. After 15 days of observation, her abdominal pain had resolved, and her abdominal ultrasound showed no free fluid. Conclusion: To date only three similar cases of spontaneous intraabdominal bleeding have been reported. Two were treated by surgical intervention, and the other with observation. Spontaneous intraabdominal hemorrhage is a rare complication in patients with congenital afibrinogemia. The minor trauma from water sports may have contributed to the bleeding from the ovarian cyst in this case.

PROSPECTIVE VALIDATION OF THE BLEED SCORING CLASSIFICATION FOR UPPER GI BLEEDING IN AN IRANIAN POPULATION

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Mortality rate associated with acute upper GI bleeding remains high despite advances in diagnosis and therapy. Some deaths are unavoidable but others can be prevented by rapid triage of high- risk cases following initial assessment and identifying high-risk patients. The aim of this prospective study is to assess the validity of the BLEED scoring classification in an Iranian population of patients with upper GI bleeding. Methods: All patients with diagnosis of upper GI bleeding over a 12-month period (2000-2001) admitted at Sina hospital were included. Data concerning type of the bleeding, presence of shock, comorbid disease, prothrombin time was used to assign a BLEED score for each patient. Patients meeting any BLEED criteria at their initial assessment were classified as high risk and all others were classified as low risk. The patients were scored from 0 to 5 according to the criteria. Outcomes was occurrence of an inhospital complication, defined as (1 recurrent GI bleeding, 2) surgery to control the source of hemorrhage and, 3) hospital mortality. (BLEED: Ongoing Bleeding, Low systolic Blood Pressure, Elevated Prothrombin Time, Erratic Mental Status, Unstable Comorbid Disease). Results: We studied 101 patients. Mean age was 56 years (SD + 21 years) with 77% males. Rebleeding occurred in 20.8%, surgery in 27.7% and 13.9% of the patients died. Seventy-one (70.2%) patients were categorized as high risk and 30 (29.8%) as low risk. There are no significant differences in rebleeding between high risk and low risk patients. Only patients in high risk group died .The morality rate was significantly higher in higher scores ($p<0.0001$). High-risk patients required surgery more than low risk patients ($p <0.05$). The specificity of test for prediction of mortality was 94% and for prediction of surgical intervention was 99%. The sensitivity of test for prediction of mortality was 67% And For Prediction Of Surgical Intervention Was 42%. The Positive Predictive Value For Mortality Was 61% And For Surgical Intervention Was Also 61%. CONCLUSION: The BLEED classification applied at initial emergency department evaluation and before admission predicts mortality and need for surgery to control of bleeding, but can not predict occurrence of rebleeding in this study.

INITIAL CLINICAL FINDINGS OF PATIENT DIAGNOSED POST OPERATIVELY WITH APPENDICITIS AT THE UNIVERSITY OF PUERTO RICO HOSPITAL EMERGENCY DEPARTMENT

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Objective: To identify the presenting signs and symptoms of patients diagnosed with acute appendicitis in a Hispanic

population and compare them with those described in the literature. Methods: We conducted a retrospective medical record review of patients diagnosed with acute appendicitis after pathologic evaluation. A standardized data collection instrument was sued to collect information on patient demographics, main presenting signs and symptoms, as well as laboratory and radiologic reports. This information was then compared with those found in the literature. Results: Two hundred patients were diagnosed with appendicitis, but only 175 had a pathological diagnosis of appendicitis. Of those patients, 100% presented with abdominal pain. More than 55% were found to have rebound tenderness. The frequency of anorexia as a major symptom in the presentation of acute appendicitis was not as common in the Puerto Rican population as it is reported in literature. Fever, vomiting and leukocytosis were found not to be significantly different from values found in literature. Conclusion: The absence of anorexia in the patient with the clinical presentation suggestive of acute appendicitis should not rule out the possibility of this diagnosis. In our population, anorexia was documented in less than 50% of the pathologically diagnosed cases.

SPONTANEOUS HEMATOMA OF RECTUS ABDOMINIS WHICH MAY BE INVOLVED WITH ACUTE ABDOMINAL PAIN IN EMERGENCY DEPARTMENT: CASE SERIES

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Introduction: Acute onset abdominal pain constitutes 5% to 10% of emergency department admissions. Only one third of these problems are related to surgical etiologies. Patients with abdominal pain are commonly diagnosed with nonspecific abdominal pain (34-52.6%) and pains of unknown etiology. Cases report: We describe 4 patients with rectus abdominus hematoma encountered in the emergency department during the last two months. Three patients presented with sudden onset of sharp abdominal pain starting after severe cough. Only one of the patients was taking agents such as coumadin and aspirin for prophylaxis of chronic atrial fibrillation. Abdominal examination showed significant left-sided tenderness in all patients. Abdominal computed tomography revealed hematomas in the left rectus abdominus muscles. The average hematoma sizes were between 6.25-13.62 cm. Prothrombin times, partial thromboplastin times, international normalized ratio, platelet counts and bleeding times were found to be between normal ranges in all patients. Hemoglobin was 9.9g/dL in the one patient taking coumadin. While this patient was admitted for correction of over-anticoagulation for one week, the others were hospitalized for only two days. The patients improving clinically and were discharged from the hospital with suggested follow-up. Conclusion: Rectus abdominus hematoma should be included in the differential diagnosis of patients with abdominal pain and emergency physicians should be aware of this diagnosis.

IS GASTRIC TONOMETRY LESS RELIABLE IN NON-STARVED PERSONS AND CAN THE ADMINISTRATION OF A GASTRIC PROTON PUMP INHIBITOR INCREASE THE RELIABILITY?

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Introduction: The purpose of this study was to evaluate the effects of intake of food and carbonic acid containing fluids on gastric tonometry and to study the effects of a gastric proton pump inhibitor (GPPI) on the endoluminal CO2 production. These mechanisms could have clinical relevance on the reliability of gastric tonometry regarding detection of intestinal hypoperfusion in non-starved critical patients admitted to an Emergency Department (ED). Methods: In 6 male volunteers a trip tonometer catheter was inserted. Heart rate, blood pressure, gastric pH, end-expiratory end tidal CO2, PiCO2 and calculated intramucosal pH (pHi) were registered at selected time intervals. Venous blood samples were also drawn to measure pCO2, bicarbonate, glycemia and lactate. In a double-blinded fashion and at the end of food intake, placebo or a GPPI (pantoprazole 80 mg and 8 mg/h) were administered intravenously. After baseline measurements, the volunteers recieved a standard meal. Another 90 minutes later, they drank a standardised carbonic acid containing fluid. The observations were stopped respectively 180 and 90 minutes after food and fluid intake. Results: No statistical differences in glycemia, comparing inter-individual measurements at identical time intervals, were found indicating a significant influence of the proton pump inhibitor on food resorption. Independent of the GPPI, a statistically significant increase in the intramucosal PCO2 was observed following food ($p<0.01$) and carbonic acid containig fluid intake ($p<0.001$). Especially following carbonic acid containing fluid intake, we observed for the intramucosal pCO2, calculated CO2-gap and pHi an average change from 36 (+/- 8) up to 116 (+/- 0.5) mmHg, from 11,5 (+/- 7.3) up to 67.7 (+/- 2.8) and from 7.51 (+/- 0.09) down to 6.97 (+/- 0.01) respectively. Considering the pH of the stomach content, the GPPI produced a statistically significant increase ($p<0.001$) of a pH of 2.0 (+/- 0.3) up to 4.45 (+/- 0.35). Conclusion: The use of gastric tonometry to detect hypoperfusion in an ED remains questionable. The suppression of gastric proton secretion at the moment of admission to an ED does not increase the reliability of gastric tonometry in detection of hypoperfusion.

ANALYSIS OF FACTORS AFFECTING SATISFACTION IN THE EMERGENCY DEPARTMENT: A SURVEY OF 1019 PATIENTS

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Background: The feeling of patients that their expectations and needs were met is referred to as satisfaction. Data regarding factors affecting satisfaction of the population in the emergency department (ED) are sparse. Aim: To identify factors

that affect overall satisfaction of the patients admitted to the ED. Methods: All consecutive adult patients in the ED in the 14-day period and could communicate well were enrolled into this cross-sectional analytic study. We questioned and recorded the patients' demographical data, information on the care and level of satisfaction. They were asked to rate specific issues concerning (good and excellent) satisfaction on a 5-point Likert scale. Effects of demographic variables and care they received on satisfaction were analyzed. Results: Responses to the survey were obtained from 1019 (91.6%) of 1113 patients for analysis during the study. The number of patients who reported satisfaction from the overall care was 962 (94.4%). Satisfaction from experience of the physicians, attitude of the physicians, triage, explanation of health status and treatment and discharge instructions were found to have significant impact on satisfaction ($p<0.001$ for each). Satisfaction of attitude of the nurses ($p=0.035$) and experience of the nurses ($p=0.045$) were found to have statistically significant relation with overall satisfaction. Satisfaction from physician experience was the most important factor affecting overall satisfaction. Patients' perception of the total time spent in the ED as "short" and "very short" was not demonstrated to have significant relationship with overall satisfaction ($p=0.162$). On the other hand, temporal perceptions as "long" and "very long" were shown to be significantly related to overall satisfaction ($p<0.001$). Conclusion: Behavioral characteristics of the healthcare providers and the hospital itself were the factors that had the greatest impact on overall satisfaction of the population in the ED.

A STUDY OF THE RISK OF TUBERCULOSIS IN NURSES WORKING AT THE EMERGENCY DEPARTMENT OF A MEDICAL CENTER

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Objective:Workers in an Emergency Department are reputed to have a higher risk of becoming infected with tuberculosis(TB). This study was carried out to obtain epidemiological data on TB among nurses of TCVGH. This was then used to develop strategies to prevent TB infection in this group and allow an estimation of the relative risk of TB infection among nurses working in an ED versus nurses working in other environments at TCVGH. Methods: This study design was a cross sectional study. Their chest x-ray reports and TB status in 1998 were collected from their routine physical checkups and chart records.The exposure of the nurses to risk factors for TB infection were collected by a structured questionnaire. this asked for the basic data, whether they had cared for TB patients while working at other hospitals and their smoking habits. Results: Compared with non-ED nurses, ED nurses had a higher prevalence of active pulmonary TB, a higher prevalence of CXR detectable pulmonary TB. By multiple logistic regression analysis, the odds ratio of CXR detectable pulmonary TB for nurses with versus nurses without working exposure to ED was 2.59. Conclusion: (1) In TCVGH, comparedd with non-ED nurses, ED nurses had a higher risk of pulmonary TB. (2) It is clear that it is necessary that continual monitoring of this high-risk professional group for pulmonary TB be carried out.

HEALTH CARE MARKETING SEGMENTATION AND POSITIONING: AN EMPIRICAL STUDY OF REGIONAL HOSPITALS AND MEDICAL CENTERS IN TAICHUNG AREA, TAIWAN

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In this study, we implemented that sociologists notion of a role lends to our construction of healthcare capability positions, a theoretical basis and represents a compelling approach to measuring clusters of Taichung hospitals. First, implemented by collecting health care data and interviewing specialists in the first place. Secondary, several indexes were compiled and transformed into their respective RPA values. Third, the Multidimensional Scaling (MDS) method was adopted to locate a company's healthcare capability position and to which strategic group it belongs. Finally, the strategic groups healthcare virtues and characteristics were analyzed and discussed. Four strategic groups were classified in this study: 1. R&D strategic group. 2. Service strategic group. 3. Niche strategic group. 4. Generalized strategic group.

ORGANIZATION OF THE INTEGRATED MEDICAL EMERGENCY SYSTEM IN LUBLIN REGION, POLAND

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Introduction: An integrated medical emergency system in Poland was created in 1999. The main elements include: emergency departments (ED) in hospitals, ambulances or helicopters and coordination centers. The Polish model is based on the experience of numerous western European countries and the United States. The Ministry of Health estimated full abilities of the Polish system will be reached in 2005. Methods: This study was designed to summarize the three year results of the Medical Emergency System in the Lublin Region, representing the agricultural region of Poland with population of 2230,8 thousand inhabitances and 25155 km2 of area. Results: The pivotal role is the ED. There were 18 EDs created in the Lublin Region during the last three years. The number of ambulances increased from 61 up to 76 in 1999 and 2003, respectively. Moreover, the dislocation of ambulances decreased the response time for sudden life threatening illness/injuries to 10 and 20 minutes in urban and rural areas, respectively. The organization of the National Helicopter Emergency System has been finished. Most of the ED has its own landing place for the helicopter. Unfortunately coordination centers are still in the future. Our system is based on an old fashioned patched multicenter communication system, while two or three well equipped coordination centers would be sufficient for the mentioned region. Conclusion: The creation of an integrated medical emergency system improved the quality of medical care in life threatening situations. However the lack of well organized communication system and insufficient number of physicians, nurses as well as emergency technicians experienced in the field of emergency medicine are the main problems to solve.

HEALTH SCREENING & REFERRAL IN THE EMERGENCY MEDICINE DEPARTMENT

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Introduction: Many studies have demonstrated the importance of performing preventive care in the emergency department (ED). These studies have used the ED as a location for patient identification and treatment facility trather than a referral site. The primary objective of this study was to identify and refer patients with unmet healthcare needs in the Emergency Department. The secondary objective was to determine if the patient would accept health referrals and follow up with a doctor or clinic. Methods: Age and gender specific algorithms were developed from the United States Department of Health, Clinicians's Book of Preventative Health Second Edition. Most of the questions in the algorithms were the exact reccomendation found in the handbook and other times necessary interpretation of the recommendation were made. An algorythm and referral form were developed from the recommendations. A convenience sample of patients who presented to the emergency department were asked to participate in the study. The inclusion criteria included all stable adult patients not in need of immediately intervention. The exclusion criteria consisted of demented patients, inability to communicate, unstable patients and those that refused. After one week the patients were followed up by telephone and after one month the computer database was queried to find out if they made an appointment with a doctor or clinic as recommended. Data was analyzed using SPSS (Chicago, Illinois, version 10.0) and test of significance using the paired T-test, frequency test and crosstabs. This study was IRB approved as exempt. Results: 272 patients were enrolled in the study: 185 between 18-64 years old and 87 over 65 years old. Overall, 161 of 272 (59.2%) accepted the referral and 45 of 85 (40.9%) contacted followed up. 81 patients did not need any referrals, 127 needed 1-3 referrals and the rest needed 4-9 referrals. 55.7% in the 18-64 age range had a PCP and 72.5% had insurance whereas, 89.7% in the 64 and older age range had a PCP and 90.8% had insurance. Making the appointment was not correlated with insurance status, gender, having a PCP (p=3D.05) but it was correlated with education (Pearson =.258, p=.000). Conclusion: 70.5% of the patients in this study were found to have unmet healthcare needs. A majority of the patients (40.9%) were given and followed up with the clinic or physician for healthcare problems identified.

WHAT DO WE KNOW ABOUT PATIENTS DYING IN THE EMERGENCY DEPARTMENT?

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Objective: To determine our knowledge in terms of cause of death and quality of death certification about patients who die in the emergency department and establish the role of autopsy in this matter. Methods: Retrospective chart review of all patients dying in an academic emergency department of a tertiary hospital during 1 year. Results: 196 patients died in the ED in 1998. On clinical ground, in 141/196 patients a cause of death could be determined. In 53/196 patients, the antemortem clinical diagnosis was unknown. 29 out of 53 patients underwent autopsy. In all but one patient autopsy revealed the cause of death. After retrospective analysis of all patient data, the major causes of death were cardiac (19,4%), cerebral (non traumatic) (16,8%), trauma (15,3%) and unknown (12.8%). In the patient group with sudden cardiac arrest of unclear origin, the postmortem cause of death was identified as cardiac (51.7%), non traumatic bleeding (10.3%), infectious (10.3%) and pulmonary embolism (3,4%). In the group of patients with a clinically clear cause of death, that underwent autopsy, 14 class II findings according to the Goldman's classification of autopsy diagnosis (i.e. major diagnosis whose detection would not have altered therapy nor outcome) were found in 16 patients. No class I findings (i.e. major diagnosis whose detection would have altered therapy or outcome) were noted. Altogether, major discrepancies between the antemortem cause of death according to the notes and the real cause of death was found in 15.3%. Conclusions: autopsy remains a very important tool to establish the cause of death in patients dying in the ED. The concordance between the antemortem cause of death recorded in the patient notes and the real cause (all patient data) is poor.

EMERGENCY DEPARTMENT VISITS BY ELDER PATIENTS: A CENTRAL ANATOLIA REPORT

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Objective: The aim of this study is to evaluate the epidemiologic and demographic properties of the ED visits by the elderly in the region of central Anatolia we serve. Method: ED records were reviewed in the three major hospitals in our city between January 1998 and January 2001. All ED cases who were 60 years of age and older were included in the study. Statistical analysis was done by using Student t test and Pearson Chi-Square. Results: Thirteen percent (79,123) of the visits were by elder patients. The increase in the elder patients=92 percentage of ED visits by years of age is significant ($p<0.001$). Female ED patients were significantly more numerous than male (51.38%, 40,656 cases, $p<0.001$). Winter had significantly higher ED visits at 26.8% ($p<0.05$). ED visits were also found significantly higher on Saturday and Sunday ($p<0.001$). There was no significant difference between genders for disposition decisions. The admission rate increases as the patient's age increases. Conclusion: Elder patients used EDs more than their proportion in the population. EDs have to be well organized for elder patients in the winter season and on weekends. Admission rate increases as the patient's age increases.

THE FIVE MOST COMMON PRESENTING DISEASES TO THE EMERGENCY DEPARTMENT BY ELDER PATIENTS

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Objective: The aim of this study is to evaluate the top five diseases for gender, age group, and seasonal differences in elder patients who presented to the emergency department

(ED). Method: The study was organized as a retrospective analysis of ED records of the three major hospitals in Eskisehir between January 1998 and January 2001. All ED cases who were 60 years of age and older were included in the study. Results: Total emergency visits was 608,528. 13 percent (79,123) of visits were by elder patients. Mean of age was 68.48,b6.47. The top five diseases were found as follows: hypertension, pulmonary diseases (bronchitis, emphysema, asthma), cardiac diseases, upper respiratory (URTI) and urinary tract infections (UTI). Hypertension, pulmonary diseases, and URTI showed seasonal difference. Conclusion: Hypertension, pulmonary and cardiac diseases are the most presented diseases in the elderly .

THE TREATMENT OF ALCOHOL INTOXICATED PATIENTS IN ACADEMIC EMERGENCY DEPARTMENTS: PRACTICES AND ATTITUDES OF EMERGENCY PHYSICIANS

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Objective: To identify emergency medicine physicians' (EMP) practice patterns for patients (pts) discharged from the emergency department (ED) with alcohol intoxication and specifically the use of interventions to address the known risk of nutritional deficiencies. Methods: A pilot-tested, anonymous, mail survey sent to full-time, adult EMP at every emergency medicine (EM) residency program in New England. Results: 171/222 surveys were returned (77% response rate) from all 11 hospitals. The respondent sample was 79% male, 90% white, with a mean age of 41 years. EMP rated the following practices as important: providing pts with a medical screening exam (98%), observing pts in the ED until clinically sober (86%), providing food (74%), and providing B-vitamins (41%): 86% food, 84% oral fluids, 72% IV fluids, 45% B-vitamins, 39% multivitamins. Almost half (49%) of the sample agreed that intoxicated patients are vulnerable to nutritional deficiencies. Almost all of the EMP (97%) who had seen intoxicated pts on recent shifts supplied them with nutritional treatments: 86% provided food, 84% oral fluids, 72% fluids, 45% B-vitamins, 39% IV multivitamins. The following were perceived as barriers to providing high quality care to intoxicated patients: lack of available detoxification centers (85%), lack of space for ED observation (78%), negative ED nurse attitudes (77%), and ED overcrowding (71%). Conclusions: With little support for these practices, a majority of EMP provide nutritional intervention for acutely intoxicated patients. However, practice patterns vary, suggesting that quality standards are needed.

PREVALENCE OF PARTNER VIOLENCE AMONG WOMEN PRESENTING TO A UNIVERSITY EMERGENCY DEPARTMENT

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Study Objective To establish point and one-year prevalence data regarding partner violence in Orange County, and to determine differences in partner violence rates when comparing descriptive variables such as race, income and education. Methods An anonymous, written survey was administered to a convenience sample of 370 women presenting to University of California Irvine Emergency Department over a 12 month period. Results Partner violence has a point prevalence of 6.7% and a one year prevalence of 37.0%. Women who have experienced previous abuse are more likely to present with complaints related to PV acutely. Lower income levels correlate with a higher incidence of physical, emotional and sexual abuse. We found no correlation between race and likelihood of PV. Conclusion PV in Orange County, California occurs quite frequently. The one year prevalence compares to that of the entire state of California, but is at the higher limit when other areas are compared. Detection rates among EPs should be improved, and services to women who have suffered PV will need to be enhanced within Orange County.

BENCHMARKING EMS SYSTEMS: A CONTRIBUTION TO A COMPREHENSIVE PUBLIC HEALTH MONITORING SYSTEM. A WORKING REPORT ON THE EUROPEAN EMERGENCY DATA PROJECT

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Due to different historical developments, there are various types of pre-hospital Emergency Medical Services (EMS) across Europe. While some EMS systems are based on the provision of pre-hospital emergency care by paramedics and emergency medical technicians, others are organised around the central role of emergency physicians. There are systems that provide as much care as possible at the scene of emergency, whereas other systems aim at minimising the on-scene and transport time. When it comes to comparing and benchmarking EMS systems in Europe, these differences become obvious and need to be carefully taken into account. Differences in outcomes cannot only be explained by medical performance, but also by system design. The analysis of resource utilisation can also not be assessed without considering the whole system. A benchmarking study started initially in 1994 with comparing the clinical and economic performance of three European EMS systems (Birmingham, UK; Santander, Spain; and Bonn, Germany) – the first European Emergency Data (EED) project. The study design was developed against the background of the different systems, using standardised scores and measurements such as the ICD coding system, the Glasgow Coma Scale (GCS), the Mainz Emergency Evaluation Score (MEES) and other outcomes scores. Basically, the study revealed best medical performance for the EMS system in Bonn, whereas the system in Birmingham was characterised by best economic performance and optimised allocation of resources. The results of that study form the scientific basis for the ongoing European Emergency Data project which is funded by the European Commission (grant agreement no.: SPC.2002299). The study comprises 12 European EMS systems and one associated partner system from the USA. Main objective of the project is to define a common set of European EMS indicators for health monitoring, including indicators on health status of emergency patients on the one hand, and on resources, performance and utilisation of the EMS system on the other hand. This presentation provides an overview of the development of the EED project,

starting with a summary of the first EED project on benchmarking and concluding with a status quo of the current project. Preliminary results of this ongoing project contain a set of indicators for health monitoring based on EMS data that is available in all of the project partner's EMS systems.

IMPACT OF COMPLEX HUMANITARIAN EMERGENCY IN EAST TIMOR ON THE HEALTH CARE SYSTEM

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During the crisis of 1999, East Timor was devastated. Most of its infrastructure, health and educational facilities were destroyed or looted. United Nations Transitional Administration of East Timor (UNTAET) established the Division of Health Services (DHS) as a body to manage the country's health care system. Need to quantify the impact of such humanitarian catastrophes on health care exists. This information is critical if appropriate educational and material assistance is to be provided in a way that leads to sustainable improvements. Study Hypothesis: Complex emergencies inevitably change the availability of medical care, though this impact has not been well quantified. As a result of the recent conflict in East Timor, it was hypothesized that there would be a significant decrease in the availability of physicians in the post-conflict setting with a particular decline in the most senior medical staff. Collection of general health indicators and morbidity statistics were compared with pre-conflict data. Methods: Data was collected from health centers in urban and rural East Timor, hospitals and central health and UN bodies. Results: After the crisis, 84% of doctors, 20% of nurses and 27% of other medical staff previously working in healthcare were no longer available. Access to care measured by a number of health center visits per person per year meets current WHO standards. The infant mortality as well as under-five and maternal mortality rates have almost doubled since last reported in 1995. The most recent estimates by WHO show infant mortality of 85/1000 and under five mortality of 124/1000. The life expectancy at birth decreased by 25% to 50 years. Conclusion: The 1999 crisis in East Timor had dramatic impact on the availability of physicians and the health of the population. In order to plan effective interventions in the post-conflict setting, further research on physician availability and subsequent impact on care is needed.

HOSPITAL CAPACITY INFLUENCES SATISFACTION OF AMBULATORY ED PATIENTS

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Patient satisfaction is an important element in the quality perception of (emergency) medical care. Improving satisfaction means improving quality of care. Institutions become more and more aware of the fact that a good medical outcome alone is no longer the exclusive parameter for quality of care. Emergency departments are confronted with this pressure by satisfaction polls and the consequent relevant question about how they will improve their performance. Purpose. To show that incapability to admit patients from the ED into the hospital, also influences the satisfaction of ambulatory ED patients. Materials and Methods: A satisfaction poll concerning the treatment in the ED was organised by the hospital's management in 2002 from March 1 until November 30. During this period, the length of stay (LOS) for ambulatory and hospitalised patients at the ED was automatically recorded by our information system. Correlations were calculated using the Pearson's correlation coefficient. Results: 21.933 patients were treated in the ED during the study period. 4.544 of them were invited at random to answer the questionnaire. Response rate was 29%. Results were presented per month. The mean dissatisfaction rate was 1,4% (0 – 3,3%). The mean LOS per month in the ED for hospitalised patients varied from 4h35 till 7h23 and for ambulatory patients from 1h38 till 3h19. Pearson's correlation coefficient between LOS for hospitalised and ambulatory patients was 0,68. Between LOS for ambulatory patients and dissatisfaction rate, Pearson's correlation coefficient was 0,80. Conclusion: Dissatisfaction in the ED highly correlates with the length of stay for ambulatory patients. The length of stay for these patients is significantly related to the flow possibilities for those ED patients who have to be hospitalised. Outflow improvement should be a major concern for the hospital's management.

EMERGENCY STAFF'S CONCEPTS AND ATTITUDES TOWARD SARS AT ITS INITIAL PHASE IN TAIWAN

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The paper records Taiwanese emergency staff's concepts and attitudes toward SARS (Severe Acute Respiratory Syndrome) at its initial period for future reference. Method: We had 326 emergency staffs (67 males and 258 females) from medical centers, regional teaching hospitals, and local teaching hospitals in Taiwan, 20 years old or older, having worked at the emergency room/department (ED) from one month to 20 years, with the average experience of 4.92 years, respond to 25 questions about the concepts and attitudes toward SARS. The data was collected when SARS were spreading rapidly, May 6-13, 2003. Results: Most medical people are aware of the full Chinese/English name of SARS and pathogen (94.70% and 96.92% respectively). Most (92.88%) stated that not all atypical pneumonias are SARS. Their prediction about when SARS to be under control: 16.56% Ss (subjects) were too optimistic, while 16.30% too pessimistic. Males are more optimistic than females. Doctors are more optimistic than nurses. More government medical workers than non-government ones feel their work place offer them enough protection against SARS, and health care people should act like soldiers to take care of patients without fleeing. 11.96% believed that only wearing N95 masks all the time can one be protected from getting SARS. Most (96.31%) agreed that health care people should have the priority to wear N95 masks when they are in short supply. 59.08% Ss were afraid that their hospitals might be closed for SARS infection. 86.81% Ss believed that ED health care people are more likely to be infected. Those who worked in government-run hospitals have more confidence in the workplace than those who did not (55.44% to 32.45%).

TRAVEL MEDICINE IN 2003: MORE THAN SARS. HEALTH SAFETY POLICY IN A CHINESE MALE WITH MENINGITIS AFTER A TRIP TO ANGOLA

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A 51-year-old male of Chinese origin was admitted to the hospital because of headache, fever and neck strain. Three days before admission, he had returned from a business trip to Luanda - Angola where he had stayed during two weeks. Because serotype B meningococcal meningitis is endemic in Angola, causing several outbreaks the last decade, a spinal tap was performed. Spinal fluid examination revealed 80 leukocytes and 130 erythrocytes; lactate and protein fraction were slightly elevated with normal glucose level. Cell count showed presence of 60% lymphocytes, 38% neutrophiles and 2% monocytes. Gram staining was negative. Because bacterial meningitis was suspected, cefotaxim and ampicillin were started preceded by a first regimen of dexamethasone. The close relatives (wife and daughter) were provided with a prophylactic dose of levofloxacin. Patient recovered well at day 2 of hospitalisation. Spinal fluid cultures remained sterile. PCR however was positive for enteroviridae. In the era of Severe Acute Respiratory Syndrome (SARS) and considering the previous outbreaks of meningococcal meningitis in Angola, the patient was isolated. Because the man had travelled from Luanda to Brussels (about 5 hours flight) and both bacterial and viral meningitis are considered to be droplet infections, the local and federal health authorities were contacted as an early warning measure. As the subject had stayed for two weeks in Angola (he travels from China to Angola and back to Belgium) SARS was not considered. The health department officers decided to inform the airport medical staff and the flight carrier to be alerted if other passengers might seek medical advise when showing similar symptomes. This case describes the difficult differential diagnosis in meningitis before any results of PCR or cultures are available, and thus the discussible health safety policy to be applied in patients with infectious diseases who travel worldwide through endemic regions.

EFFECT OF OCCUPATIONAL STRESS IN THE INTERPERSONAL RELATIONSHIPS BETWEEN THE HEALTH CARE PROFESSIONALS IN THE EMERGENCY DEPARTMENT

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Objective: Stress is a common problem among health care professionals, especially when they work in a high-activity critical care area like the emergency department (ED). This study tries to determine how the work stress will affect the interpersonal relationships among health care professionals in an ED. Methods: After appropriate consent, a questionnaire was distributed to all health care professionals that had been working for 6 months on the staff of a university-based, level II trauma ED. The questionnaire consisted of demographic data and 43 open ended questions. Results: The mean age was 32.3 years with a median 30 years. Gender distribution included 28 (64%) females and 16 (36%) males; and the respondents included 24 (58%) physicians, 15 (34%) nurses, 5 (8%) other personnel. The study revealed that physicians have better relationships with their peers than the other studied personnel. Patient relationship was not affected by work stressors. The greatest stressor for the non-physician personnel was income, job environment and work load. Half of the participants understood the institution is doing less than average to minimize the stress in their work environment. Conclusion: This study revealed that in this ED, the occupational stress affects the interpersonal relationships between health care professionals and their peers more than the relationships with the patient and participants families. Further investigation in this matter is warranted to establish a significant and effective method to reduce the work-related stress improving the staff relationships with their peers.

PNEUMOCOCCUS AND INFLUENZA VACCINE: IMMUNIZATION STATUS OF ELDERLY PATIENTS EVALUATED AT THE EMERGENCY DEPARTMENT

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Objective: To assess the influenza and pneumococcus immunization status of elderly patients who visited a university-community based emergency department (ED) and the patients' willingness to receive them if provided. Methods: We conducted a telephone survey of ED patients over 65 years old. Patients were asked about prior influenza and pneumococcal immunizations, and non-immunized patients were asked if they would accept these immunizations as part of the ED care if offered. Results: Ninety six patients were enrolled. Fifty nine percent had not received either one of the vaccines. 39% had received influenza vaccine, but 61% had not. 27% had received pneumococcal vaccine while 73% had not. 50% of the patients received their immunizations at their primary care physician's office, 22% at the local health center, 22% during immunization campaigns and 3% at hospital sponsored clinics. All of the surveyed patients were eager to receive immunizations at the ED if provided. Discussion: Over 50% of the surveyed patients lack adequate influenza and pneumococcal immunizations. The Center for Disease Control and Prevention (CDC) has stated that proper elderly vaccination will help in disease prevention and morbidity. All of the patients were willing to receive it during an ED visit regardless of reason if offered. Conclusion: The majority of the surveyed ED patients over 65 years old are not adequately immunized against pneumococcal and influenza as recommended by the CDC. All surveyed patients will accept these and other immunizations if available at the ED.

MEDICAL MALPRACTICE EXPERIENCE IN TWO DUTCH EDS

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Background: Fewer claims and lower payouts characterize the primary differences in medical malpractice claims between The Netherlands and the US. It is well known that not all

patient complaints evolve into legal claims. In the Dutch system all complaints are first reviewed by a special mediation board. When a complaint is not settled by this board patients are able to bring suit through Medirisk, the major medical insurance company in The Netherlands. Most patient complaints are settled out of court by the mediation board. Methods: During a three year study period we collected data on ED related patient complaints in two teaching hospital EDs. We compared these data to those in the US. Results: Out of 179,354 ED patient visits there were 142 complaints (0.079%). Overall, during the 3 year study period, all hospital departments generated 2064 complaints of which 124 progressed to legal suits (6%). The exact number of the ED complaints that resulted in legal action is unknown, but; extrapolating from the experience cited above, we would expect 8 to 9 cases to result from ED patient complaints. In a comparable US medical malpractice database (the Harvard Medical Practice Study), 31,429 patient encounters resulted in 51 legal claims (0.16%). With a 95% CI this is significantly higher than the number of complaints in our experience (0.000367-0.00129). From 1993 to 2000 the highest payout by Medirisk was 215,000 Euros (approx. $215,000). It is well known that in the US medical malpractice settlements routinely exceed $1,000,000. Conclusions: When compared with the US, patient complaints in The Netherlands are far less likely to progress on to medical malpractice claims. This may reflect the influence of the mediation board on the medical malpractice process. Medical malpractice settlements in The Netherlands tend to be lower than in the US. This may reflect the fact that Dutch courts stringently restrict payouts to medical malpractice claimants.

TO BE VACCINATED OR NOT TO BE VACCINATED? TURKISH EMERGENCY PHYSICIANS' SMALLPOX SURVEY

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Background: Smallpox, an acute contagious disease, is one of the most devastating diseases known to humanity. Although smallpox was officially declared eradicated in 1979, after the events of September 11, and before military action against Iraq there has been heightened concern that smallpox might be used as an agent of bioterrorism. Therefore, there has been discussion and controversy regarding reinstitution of vaccination programs for prevention of smallpox attack. Despite the ongoing debate, the Turkish emergency physicians' (EPs) opinions regarding smallpox vaccination are not known. Objective: To investigate Turkish emergency physicians' opinions about the threat of smallpox, smallpox vaccination, and the treatment of patients with suspected smallpox. Methods: The study was conducted between January 30, 2003 and April 24, 2003. Eligible subjects were all emergency physicians and physicians in emergency medicine residency programs in Turkey. We used and anonymous survey to ask participants their opinions about the perceived risk that smallpox will be used as a bio-terrorism agent in Turkey, and their willingness to be vaccinated against smallpox. They were also asked their views about the treatment of patients with suspected smallpox. Results: Ten of the 21 total programs participated in the study. A total of 125 physicians (26 emergency physicians, 99 residents) completed the survey. The response rate was 90.5%. Results are summarized in Table 1 and Table 2. Conclusions: Half of Turkish EPs would not currently volunteer for smallpox vaccination. If an isolated case of smallpox occurred in Turkey, this rate decreased to (25.6 %) - half of EPs would choose to receive vaccine. Decisions about the treatment of patients with suspected smallpox strongly influenced the decision to be vaccinated against smallpox. Emergency physicians' opinions may influence policy decisions of governments and the public.

SUSPECTED USE OF EXCESSIVE PHYSICAL FORCE BY LAW ENFORCEMENT OFFICERS: A SURVEY OF ACADEMIC EMERGENCY PHYSICIANS

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Background: In 1999, 43 million people in the US had face-to-face contact with law enforcement. Of these, 500,000 were hit, kicked, pushed, choked, hit with a flashlight or baton, restrained by a K-9 dog, sustained pepper spray injuries, or were threatened with a firearm. Usually law enforcement officers use only enough force to control or subdue an individual. At times they exceed the bounds of necessary force leading to excessive use of physical force. How often excessive use of physical force by law enforcement officers occurs, is unknown. Anecdotally, many emergency physicians (EPs) have seen patients they suspected had sustained trauma from excessive use of physical force by law enforcement officers. Objectives: Determine EPs experience, clinical practice, education and training, and perspectives involving patients injured by suspected use of excessive physical force by law enforcement officers. Methods: This study consisted of a mailed survey to a random sample of all full-time academic EPs (2,239) in the US. The survey was conducted from 5/02-12/02, and we sent up to 4 mailings. The questionnaire contained 36 questions. Results: 314 of 393 EPs responded (80%). 74% of respondents were male. The race of respondents was white (88%), Asian (6%), Hispanic (4%), African-American (3%). 97% of EPs have seen patients they suspected were victims of excessive use of physical force by police. 67% of EPs estimated recognizing >2 cases per year. 92% of cases involved injuries due to blunt trauma: batons (32%), flashlights (25%), fists and being kicked (47%). EPs at public teaching EDs were 4.2 (95% CI 1.95, 9.21) times more likely to see patients they suspected had been subjected to excessive force than EPs at university or community teaching EDs. 74% of cases of suspected use of force went unreported by EPs. 96% of EDs have no policies or guidelines for managing cases suspected of involving excessive use of force by law enforcement officers. 71% of EPs believe that it is within their scope of practice to refer cases of suspected excessive use of force for investigation, and 50% believe that EPs should be legally required to report cases of suspected excessive use of force by police. 93% of respondents had no education or training in the management of suspected excessive use of force cases. Respondents believe excessive use of force by police occurs very often (1%), often (6%), sometimes (48%), rarely (44%). Conclusion: This study shows that the vast majority of EPs have managed patients they suspected of being injured due to excessive use of physical force by law enforcement officers. The majority of cases went unreported, although most EPs believe that these cases should be referred for investigation. This study also points out the need for education and training in the management of patients with injuries from suspected excessive use of force. ACEP,

SAEM and AAEM should develop management guidelines and educational programs for patients with injuries from suspected use of excessive physical force by law enforcement officers.

MEDICAL STUDENT PARTICIPATION IN A STUDY IN COSTA RICA ON PESTICIDE EFFECTS AMONG FARMWORKERS

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Five medical students participated in the Study of Agricultural Lung Disease (SALUD) in Costa Rica led by the Department of Epidemiology & Preventive (EPM) Medicine at UC Davis. Students were funded by EPM and university grants, and received credit for the rotation. SALUD is a multidisciplinary research project examining health effects from pesticide exposure in farm workers. It provided a unique opportunity for medical students to gain experience in international field research and direct involvement in data collection. Students had contact with pulmonary physicians, epidemiologists, industrial hygienists, biostatisticians and other public health professionals from UC Davis and the National University of Costa Rica. Students participated in the following activities: 1) research planning activities at UC Davis and in Costa Rica, 2) training and field collection of study data from farm workers including vital signs, spirometry, diffusion capacity and exercise testing. Each student also focused on a specific research question addressed by the study. Additionally, students had the opportunity to pursue further data analysis/research pertaining to the study upon their return to UCD. The details of each student's research project and the final outcomes are still underway. Additional benefits to students from this research experience included: immersion in a foreign culture and language; experience in International Medicine / Public Health; experience in planning and conducting field research in another country; exposure to practical issues in occupational and preventive medicine; and contact with Central American physicians and researchers for future collaboration. Practical lessons from this experience will be presented.

OCCULT BACTEREMIA AMONG FEBRILE CHILDREN IN THE CUKUROVA REGION OF TURKEY: EFFICACY OF A RISK SCORE IN DETECTING OCCULT BACTEREMIA

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Objectives: To provide the data on the rate of occult bacteremia in febrile children 3-36 months in the Çukurova region of Turkey, and to determine the diagnostic power of WBC, and manual differential counts of the peripheral blood smears in detecting occult bacteremia in febrile children. Design: A prospective, observational clinical study. Setting: The Pediatric Emergency Medicine Department of an university hospital with 12.000 annual visits from February 2001 to April 2002. Patients: Three hundred-and seventy-seven febrile children, aged 3 to 36 months. Interventions: CBC, manual differential counts, and blood cultures were obtained from all patients. The patients were hospitalized when deemed necessary for observation or were on telephone follow-up at home for 21 days. Main outcome measures: The outcomes were sensitivity, specificity, positive predictive value, negative predictive value, odds ratio, posterior probability and area under the receiver operator characteristic curves and miss-to-diagnosis ratio to calculate the accuracy of the diagnostic tests. Results: Occult bacteremia was detected in 4.4% of the study patients and the most commonly encountered pathogen was S. pneumonia. The age, temperature, WBC count and the percentage lymphocytes in the peripheral blood smear of the patients to determine the occult bacteremia did not have a statistically significant relationship ($p>0.05$). The Yale Observation Scale scores, the percentage neutrophil, the percentage band form, band-neutrophil ratio, in the peripheral blood smear, the absolute neutrophil count, the absolute band count as predictors of bacteremia was found to be statistically significant. When the RISK score was 2 or more, prediction sensitivity of occult bacteremia, false positive ratio, positive predictive value, negative predictive value, miss-to-diagnosis ratio (MDR), odds ratio and posterior probability value were determined as, 93.8%, 35.8%, 10.6%, 99.5%, 26.2 (95% CI: 3.4-200.8), 0.066, 10%, respectively. Conclusion: We conclude that, among febrile patients aged 3 to 36 months without an identifiable focus of infection on physical and laboratory examinations, before deciding to take samples for blood culture, evaluating the RISK score will significantly decrease unnecessary blood culture sampling, initiation of antibiotherapy and hospitalization.

NEW CONCEPTS IN THE MANAGEMENT OF SEPSIS (REVIEW)

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Basic principles of the management of severely septic patients include: removal of the septic source, antibiotic therapy, early enteral feeding and early fixation of long bone fractures in multi-trauma patients. Recent trials that have targeted endotoxins and anti-inflammatory mediators failed. It was thought that there is a threshold of severity of disease that should be known before anti-inflammatory therapy can be used. This is difficult to predict clinically. Anti-tumour necrosis factor and interleukin 1 receptor antagonists were tested in septic patients. They were useful in the sicker patients and were thought to be deleterious in less severely ill patients. PAF antagonists failed to show any improvement of the overall mortality in septic patients. Nevertheless BN 52021 showed improved mortality in the subgroups of patients who had Gram-negative sepsis, who were admitted with shock, or who were over 60 years old. Theoretically, blockade of the proximal mediators may interrupt the inflammatory cascade. In reality, the interaction between the mediators of sepsis is so complex that the single bullet approach may not work. Multiple steps may have to be blocked at the same time. The principle of the dynamic nature of anti-inflammatory pro-inflammatory balance in sepsis has recently emerged. This gives more weight to try to understand the patho-physiology of the inflammatory process and predict the severity of the disease.

NEEDLESTICK INJURIES. A NEED FOR GREATER URGENCY

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Introduction – Needlestick injuries are an occupational hazard for junior doctors especially in emergency medicine. The emergency department is involved in the management of injuries both in the hospital setting and in the community. The setting was in an inner city area with a high incidence of intravenous drug abuse, HIV, hepatitis B and C. The study was to determine time taken to present to hospital and time for PEP. Methods – A retrospective review of all emergency notes coded as needlestick injury for a 12 month period from 1st July 2001-2002. Information recorded included times, from incident, arrival at department, to be seen by doctor and to get pep if indicated. Also the number of tetanus toxoid, hepatitis B immunoglobulin/vaccine, HIV pep given as well the number indicated. Risk of injury and exposure were assessed and follow up was checked. Results – There were 73 needlestick injuries, 35(48%) presented during normal working hours 9-5pm and 38(52%) outside these hours. 26(34%) were in healthcare workers, 51(66%) nonhealthcare workers. The average time from incident to arrival was 1.4 hours for healthcare workers and 22.6 hours for nonhealthcare workers. The median time from arrival in the department to be seen by a doctor was 90 minutes. 10(13.7%) injuries were high risk. Antiretroviral agents were given to 15(20.1%) patients and average time from door to HIV pep was 141 minutes. Conclusion – Emergency medicine staff should be aware of the risks of bloodborne viral transmission as they have greater exposure than other healthcare groups. They are at higher risk of percutaneous injury therefore should adopt universal precautions, shield and sheath devices would also reduce the risk of sharp injury. The HIV pep is effective if given early so these patients must be assessed urgently and antiretroviral agents given as soon as possible if indicated. Emergency medicine has had an increasing role in management needlestick injuries in healthcare workers occurring outside working hours, out of hospital injuries and other attendances for HIV pep. Greater education of emergency staff, other healthcare workers and the general public is required for optimal management of needlestick injuries.

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EFFECT OF ADMINISTRATION OF GLUTAMINE AND N-ACETYLCYSTEINE ON HEPATIC ANTIOXIDANT MECHANISMS IN SEPSIS

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Glutathione(GSH) has been known to be an important intracellular antioxidant. The aim of this study was to investigate the effects of the glutamine and N-acetylcysteine (NAC) on lipid peroxidation and plasma TNF-alpha, IL-1, and nitric oxide (NO) concentrations in sepsis model. All female Sprague-Dawley rats were given an intraperitoneal diethylmaleate (DEM) injection before treatment, and divided into four groups : control group (DEM only), LPS treated group (DLPS), LPS with glutamine treated group (DLPG) and LPS with both glutamine and NAC treated group (DLPGC). Animals were killed at 6 and 24 hours after treatment. The histology and the counts of the infiltrative neutrophils, the levels of MDA, GSH in the liver, and plasma TNF-alpha, IL-1 and nitric oxide (NO) levels were measured. While the liver histology in the both DLPG and DLPGC groups showed mild neutrophil infiltration, vacuolization of hepatocytes, and the sinusoidal dilation compared to those of the DLPS group, there was no significant change of the neutrophil counts between the treatment groups. Both the DLPG and DLPGC groups showed decreases in liver MDA level compared to the DLPS group. Although both the DLPG and DLPGC groups demonstrated significant increases in the liver GSH level compared to the DLPS group, there was no significant change between the DLPG and DLPGC groups. There was no significant change in the plasma TNF-alpha, IL-1 and NO levels between the treatment groups. This study showed that the administration of the glutamine and NAC in sepsis model revealed an inhibition of the lipid peroxidation and an antioxidant effect through the increase of GSH in the liver. The inhibitory effect of the glutamine and NAC on the level of plasma TNF?-alpha, IL-1 and nitric oxide was not clearly shown.

ACCESS TO CARE AND USE OF HEALTH SERVICES AMONG HIV-INFECTED PATIENTS IN A PUBLIC HOSPITAL EMERGENCY ROOM

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Objective: To determine if HIV-infected patients use the ED as their source of primary care. To determine the severity of these patients HIV disease and use of antiretroviral therapy (ART) in these patients. Methods: This is a retrospective probability-based sampling of HIV+ patients seen in the San Francisco General Hospital ER between 11/99 through 4/00. Review of prior ER census data was used to sample ER shifts in proportion to ER activity. All ER patients seen during sampled shifts were asked their HIV serostatus by trained interviewers; status was confirmed by chart review. Viral loads (VLs) were measured at time of interview and assayed using the Roche b-DNA assay. Results: 166 participants were enrolled,

representing 70% of those eligible. Median age was 39 years; 72% were male; 60% reported prior injection drug use. 64% had public insurance, 29% no insurance, and 5% private coverage. Median time since first HIV+ test was 88 months. Participants reported a median of 1 ER visits in the prior 6 mos. 55% of participants reported no ART use in the prior 6 months, 13% of participants reported having no primary provider, and 8% of those who reported having a provider had not seen that provider during the prior 6 months. Median VL of those with a provider was 22,250 copies/ml, compared with 65,000 copies/ml of those without a provider (p >.05). In multivariate analysis, controlling for CD4 count, not seeing a primary provider in the prior 6 months was associated with lack of any health insurance (OR 3.5, 95% CI 1.1-11.3), not receiving support services (OR 6.6, CI 2.0-22.0), and decreased likelihood of receiving ART (OR 0.1, 95% CI 0.03-0.4). Conclusions: ER use among most HIV+ persons does not appear to be the result of the lack of primary care, and ER use is infrequent. However, improving healthcare coverage and linking HIV+ persons to support services may increase access to primary care among those who have no provider, and increase use of ART.

IMPLEMENTATION OF GUIDELINES FOR EMPIRIC ANTIBIOTIC THERAPY IN THE EMERGENCY DEPARTMENT (ED)

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Objective: To evaluate the implementation of guidelines for empiric antimicrobial treatment in the E.D, regarding ambulatory and hospitalized patients. Material and Methods: patients who attended the ED and received antibiotic treatment were analyzed retrospectively, according to the hospital guidelines for antibiotic treatment in the ED. and to the General (Clalit) Health Services guidelines for antibiotic treatment. Incorrect treatment was defined by type of antibiotics and dose. Results: A total of 200 patients between 14 - 96 years old (44.9±21.3), were evaluated, including, 156 patients who were discharged from the ED and 44 who were hospitalized. The main diagnoses in the subgroup of patients who were discharged included, lower urinary tract infections (UTI)- 38.5%, acute tonsillitis-14.1 %, pneumonia-12.8%, upper respiratory tract infection-8.3%, and soft tissue infections-7.7%. Leading antibiotics for this subgroup were: roxythromycin, amoxacyllin/clavulanic acid, doxycycline, ofloxacin, and phenoxymethyl penicillin. In the subgroup of hospitalized patients, the main diagnoses were pneumonia-36.4%, UTI-29.5%, and fever of unknown origin-11.4%. Only 19/44 (43%) of the hospitalized patients started antibiotics at the ED. Leading antibiotics in the hospitalized patients that begun therapy at the ED were cefuroxime-68.4% and ceftriaxon-15.7%. For more than half of the diagnoses (59%) at the ED, the empiric antibiotic treatment given was incorrect, according to both mentioned guidelines. Wrong treatment was more frequent in the subgroup of patients who were discharged than in the patients who were hospitalized: 99/156 (63%) vs. 18/44 (41%), respectively. Conclusions: Despite guidelines for the administration of empiric antibiotic therapy, a high proportion of patients still receive incorrect antibiotic therapy. Further, massive work, should be done in the ED to implement these guidelines in order to optimize antibiotic treatment and to prevent the development of resistant pathogens.

ANTIBIOPROPHYLAXIS FOR BORRELIA IN ENDEMIC AREAS: DO OR DON'T?

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Prophylactic administration of antibiotics after tick bites remains controversial. An American study suggests the use of single dose doxycycline in endemic areas. Although an endemic area, antibiotic prophylaxis is not commonly used in our region. We present a case series of serologically confirmed Borrelia treated in 2001 and 2002 at our hospital. Cardiology: A 43-year-old man was seen for multiple episodes of syncope due to 3rd degree AV block. He received a pacemaker and IV antibiotics. He recovered and the pacemaker was extracted after one year. A 32-year-old man was admitted for retrosternal pain, multiple syncopal events and flue like complaints. He had pericarditis and 3rd degree AV block and was treated with a temporary pacemaker, intravenous antibiotics and acetyl-salicylic acid. After removal of the pacemaker he had an ipsilateral deep venous thrombosis of the venae jugularis and subclavia. Pediatrics: 3 boys were treated with antibiotics. One 9-year-old for neuroborreliosis, one 10-year-old for neuroborreliosis with a facialis paresis and one 9-year old for erythema chronicum migrans (ECM). Neurology: 4 patients were treated for neuroborreliosis and 9 for neuritis (facialis (6), trigeminus, ulnaris and 2 plexus brachialis); 1 female had a diffuse, migrating sensory loss. Dermatology: 7 patients were treated for ECM. Osteoarticular: 2 patients were treated for arthritis. Although Borrelia infections respond well to antibiotic therapy, the severity and frequency of the pathology seen in our hospital justify consideration of antibiotic prophylaxis, especially if single dose schemes are efficacious. Doxycycline however cannot be used in children and pregnant or lactating women. Further prospective studies on endemic prophylaxis and alternatives for doxycycline seem necessary.

ANTHRAX RELATED PRESENTATIONS TO THE EMERGENCY DEPARTMENT DURING THE ANTHRAX CRISIS OF 2001

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Objectives: To characterize anthrax related presentations during the anthrax crisis of 2001 in New York City (NYC). Methods: Retrospective study of anthrax related cases or concerns presenting to a tertiary academic emergency department (ED) in NYC from September to December of 2001. All records including complaints such as powder exposure, upper respiratory symptoms, rashes, and sepsis are reviewed for anthrax related cases. Patient characteristics, complaints, exposure risk, and therapy were assessed. An additional 200 randomly selected controls were concurrently reviewed to compare patient characteristics. Descriptive statistical and univariate analyses were used to characterize and compare responses. Results: 280 records with anthrax related cases were identified. Patient characteristics were: age 44 +/-16 years, 51% female, 50.2% Caucasians, 18.5% Blacks, 17.8%

Latinos, 13.5% others. The presenting complaints were 47.5% powder exposures, 31.8% cough related or viral syndrome, 13.5% rashes, and 7.1% nonspecific symptoms. 33.9% were treated with antibiotics. 64% had nasal culture for anthrax performed; all returned negative. Of the powder exposures, 87.2% were considered low risk and 12.8% of moderate/high risk. One patient was diagnosed with cutaneous anthrax. Numerous public health recommendation changes occurred during this period. Compared to the controls, anthrax related cases were more likely to be Caucasian ($p<0.001$, OR = 4, 95% CI 2.6-6.3), female ($p=0.01$, OR = 1.7, 95% CI 1.1-2.4), insured ($p<0.001$, OR = 7.3, 4.7-11.3), and employed ($p<0.001$, OR = 12.7, 7.8-19.7). Conclusions: Significant resources and antibiotics were used to manage anthrax related ED presentations, even though most presentations were of low risk. Anthrax related patients were more likely to be Caucasian and more affluent than our baseline population. Lessons learned from these bioterrorism events should be used to address medical and public health responses in the future.

ANTIMICROBIAL RESISTANCE OF STREPTOCOCCUS PNEUMONIAE RECOVERED FROM PATIENTS WITH LOWER RESPIRATORY TRACT INFECTIONS IN THE UNITED STATES DURING 1997 - 2000

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Background: Penicillin-resistant Streptococcus pneumoniae has been rising at an alarming rate since the early 90's according to several large national databases with non-susceptible rates of 33-45%. Objective: To determine the penicillin non-susceptibility rate of S. pneumoniae strains isolated from patients with community-acquired pneumonia. Methods: EMERGEncy ID NET is a CDC-sponsored sentinel network of 11 U.S. emergency department sites, which addresses infectious disease issues. As part of EMERGEncy ID NET, a prospective, observational, IRB approved surveillance study was conducted from June 1997 to September 2000. Blood and sputum cultures were obtained at physicians' discretion for hospital-admitted patients over 17 years of age with community-acquired pneumonia or suspected tuberculosis. Susceptibility of S. pneumoniae isolates to penicillin was determined according to established NCCLS guidelines. Descriptive statistics were used in this pooled data. Results: A total of 3647 blood and 2557 respiratory culture specimens were obtained from 5632 patients. S. pneumoniae was isolated in 330 cultures (147 blood, 143 sputum, 40 both) and susceptibility data were available on 166 isolates. Among the isolates, 145 (87.3%) were sensitive to penicillin, 14 (8.4%) had intermediate susceptibility, and 7 (4.2%) were resistant. Resistance rates varied by region as follows: South Atlantic states (16.7%), the Pacific and Midwest regions (6.7%), and Mountain states (3.6%). No resistant isolates were found among cultures from the East South Central, Mid Atlantic or New England regions. Conclusion: The overall and regional penicillin resistance rates found in this surveillance study of pneumococcal strains isolated from adults with community-acquired pneumonia were substantially less than rates reported in various antimicrobial resistance surveys during the same period in which the patient population from which isolates were obtained were not restricted to patients with pneumonia.

PREHOSPITAL FIELD EVALUATION UTILIZING 1XEV-D0 WIRELESS INTERNET

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Introduction: 1xEV-D0 cellular technologies is now available in limited areas in the United States. In this pilot study, we examine whether 1xEV-D0 provides sufficient bandwidth to enhance care while en route to hospital. Methods: We equipped a simulated ambulance with wireless Internet, laptop computers, and a USB digital video and linked it to ordinary hospital workstation 15 miles away using VPN encryption and MS Net Meeting. To test communications, a paramedic and four actors simulated common emergency scenarios (stroke, trauma, CHF, AMI) while being transported in an area with experimental 1xEV-D0 services. Emergency physicians provided on-line supervision of the paramedic during simulated ambulance runs while being observed by medical sociologist. Results: Rates of video and data transmission were acceptable with occasional delays and few "dead areas". However, audio quality was unacceptable and a second cellular connection was used in place of voice-over-IP. Physicians were able to direct the paramedic and correctly diagnosed the simulated condition in all 4 cases. They found the technology easy to use, and believed the link-improved interaction/communication. Three of 4 felt better prepared to receive the patient as a result. Conclusions: While further refinements of the technology will be useful, Internet cellular technologies appear to provide sufficient bandwidth to enhance mobile field care.

ASSESSMENT OF A CONCEPT FOR TRANSMISSION OF DIGITAL PICTURES AND VIDEO SEQUENCES VIA GSM MOBILE PHONES IN OUT-OF-HOSPITAL EMERGENCY MEDICAL USE

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Objective: The documentation of clinical findings by digital imaging and the early transmission of information (e.g. 12-lead-ECG) to the hospital offer positive effects for out-of-hospital emergency medicine. Newest generation mobile phones equipped with an integrated digital camera, recording and transmitting images and video sequences, allow prehospital documentation and immediate transmission of clinical findings to the in-hospital physician to improve information of the receiving facility. The aim of our study was to evaluate the feasibility of this concept in the out-of-hospital use. Method: A GSM mobile phone (NOKIA 7650 with Video Messaging Software, Nokia/Finland) was tested by 10 physicians. The duration of acquiring and transmitting a picture (24-bit colors, JPEG-format, 25kB) and a 15-second-videosequence including sound (.3GP-format, 15 frames/sec, 95kB) were recorded. Successful transmission via Multimedia Messaging Service/MMS and GPRS was evaluated. Results: Mean times were for 8±3 seconds for taking an image and 30±4 seconds for recording a video sequence.

Both transmission and reception time was 55 seconds per video. Transmitting the data to the in-hospital physician´s GSM mobile phone caused no errors. Conclusion: Besides on site documentation, this new mobile phone concept may serve as basis for a simple telemedicine system. Although resolution and picture quality are low, satisfactory clinical findings can be transmitted easily and quickly to allow immediate discussion with an in-hospital physician for special patient groups (e.g. neurologist for management of stroke patient). Recording and transmission was easily learned by the physicians.

TO TRI OR NOT TO TRI, THAT'S A QUESTION…FOR COMPUTERS!

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Triage (Tri) becomes common use in disaster and emergency medicine. Classifying patients might be a life saving procedure in times of overcrowding emergency departments (ED). While disaster management is a time limited event, running an ED is a 24/7 occupancy. The decision to use a permanent triage system has costly repercussions when there are large periods of lower medical activity. Purpose. To find out whether it is worth to introduce a permanent triage system in our ED, based on data gathered by our information system. Materials and methods: In 2001 and 2002, all patients arriving in the emergency department were automatically timestamped when entering the information system and when transferring them from the waiting room (Twait) to a treatment room (Ttreat) in the ED. Mean waiting times (Ttreat-Twait) and total admissions were calculated daily. In our theoretical model, we can guarantee an equal mean daily waiting time, until we reach a daily admission saturation point (DASP). The curves (daily admissions versus mean waiting time) were constructed for both years to evaluate the theoretical model. The DASP was calculated for both years as well as the frequency of days exceeding our DASP. Results: The shape of the calculated curves was equivalent to the curve of the theoretical model. The curves for 2001 and 2002 were identical. The DASP was at 62 patient admissions per day. Both years revealed a mean waiting time before the DASP of about 7 minutes. The DASP was exceeded in 36% of time. Discussion. We decided not to introduce a permanent triage system yet. We will evaluate a cheaper solution in the same way after implementation. Conclusion: We developed a model that gives the opportunity to make structural decisions based on the evaluation of waiting times in the ED. This model might be applicable to any ED that works with an information system with automatic timestamping capabilities for all patient procedures.

THE EFFECTS OF A COMPUTERISED TRIAGE SYSTEM ON A&E DEPARTMENT WORKLOAD (PART II): PRESENTATION OF EMERGENCY TRIAGE SOFTWARE

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The objective of this presentation is to show how the EMERGENCY TRIAGE SOFTWARE, which is the electronic support of the Computerized Triage System, is being used from a practical point of view. Methods: Using different case presentations as practical examples, we show in detail how the EMERGENCY TRIAGE SOFTWARE operates. The Computerized Triage System is based strictly on the Manchester Triage System, reflecting all its categories and target times. Once patient's data, presenting complaint and baseline clinical observations are entered in the computer, the software shows a series of algorithms and flow charts for various "presentations", with "key discriminators", which determine the triage category. Finally the patient is assessed within the target time according to the triage category assigned to him by the computer.

COMPARISON OF EMERGENCY ROOM COMPUTER-BASED DISCHARGE INSTRUCTIONS AND PRESCRIPTIONS WITH TRADITIONAL, HAND-WRITTEN FORMS

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Objective: Discharge instructions provide important patient care information and mitigate malpractice exposure. However, handwritten discharge instructions are frequently cited as illegible and incomplete. We sought to determine whether a computer-based discharge system would both improve the efficiency of the Emergency Physician (EP) and provide more complete instructions. Methods: Observational study of 18 emergency medicine residents in a 25 bed teaching facility servicing 46,000 patients per year. Data was collected both prior to installation of a computer based system ("hand-written system") and at 1 and 6 months following the implementation of a computer-based system. Major outcome measures were determined a priori as the time taken to prepare discharge instructions and the number of specific reasons/phrases given for a patient to return for care. Results: Computer-based discharge instructions reduced the time taken for discharge instructions from four minutes for hand-written instructions to less than a minute for computer-generated instructions. Hand written instructions had a mean of four reasons to return, while the computer-generated form had 12. Additionally, 95% of patients in the computer-discharged group received disease specific instructions sheets, compared with 30% for the hand-written group. Conclusion: Computer-based discharge systems provide a more efficient and thorough discharge process.

PARINAUD SYNDROME: CASE STUDY

LANZA M

Personal background: Right nephritic colic when she was 20 years-old, and receiving an oral contraceptive. Current disease: A 29-year-old woman attended the emergency services (ER) with a complaint of fuzzy vision scene and a 2-hours-evolution right hemicranial headache, together with paresthesias in the right periorbicular region and frequent vomiting. The clinical symptoms started after defecation (constipated habit). The patient did not recall infectious symptoms or trauma, nor had she taken any new medicine in the previous days.

Physical exam: General: Normal. TA 115/65 Neurologic: Vertical glance paralysis, both upwards and downwards in bilateral way with good mobility in the horizontal level, focal convergence disturbance, no long "way" focus, negative

meningeal symptoms, no nucchal rigidity. Initial Clinical Impression: With the patient's symptoms and the physical exam findings our differential diagnosis included subarachnoid and/or parenchymal hemorrhage, migraine, medicine adverse effect, demyelinating diseases and/or tumors. Complementary tests performed revealed: Normal HRF, biochemistry test and coagulation, and a normal chest X-Ray. Cranial CT scan revealed mesencephalon hemorrhage with intraventicular bleed that led to hydrocephaly (probable Silvio's aqueduct compression). Diagnosis: Parinaud Syndrome of hemorrhagic etiology. Conclusion / Discussion: Most of the mesencephalon lesions have thrombotic etiology, although primary tumors are also frequent. The Parinaud Syndrome consists in vertical gaze paralysis and focal convengence, added to paralytic mydriasis. Neurologic exploration is the main diagnostic test in the emergency services, and for this reason it must be done in the most strict way to every patient with neurologic symptoms, as it takes very little time to do, allowing the doctor to take diagnostic-therapeutic decisions with the obtained results.

CEREBROVASCULAR DISEASES IN EMERGENCY UNIT IN BARANYA (EAST CROATIA)

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Emergency Unit of the Beli Manastir Health Center (BMHC) covers the whole area of Baranya (1148 square kilometres) with a population of 42,633 inhabitants living in the town of Beli Manastir and 45 surrounding villages. The nearest inpatient institution is Osijek University Hospital in Osijek, at a 33 km distance from Beli Manastir. The aim of the presentation is to provide the survey of patients with clinical picture of cerebrovascular diseases (CVD) examined at BMHC Emergency Unit from November 1, 1997 (the time of Baranya reintegration into the legal system of the Republic of Croatia after the war) till December 31, 2001. During the study period, 513 patients with CVD symptoms, 250 men and 263 women, mean age 69,46 (age range 25-100) years, were examined. A majority of patients belonged to the 61-70 (n=201) and 71-80 (n=176) age groups. The greatest number of patients (n=152) were examined during the year 1999. The following diseases were diagnosed in the study cohort: transient ischemic attack (TIA) in 36, ischemic stroke in 25, hemorrhagic stroke in 14, nonspecified stroke in 392, hypertensive encephalopathy in 22, late stroke sequels in 24 patients. In the group of patients with the diagnosis of nonspecified stroke (n=392), a female predominance was recorded (206 women vs 186 men). 401 patients were referred to and 229 of them were hospitalized at the Department of Neurology, Osijek University Hospital. Out of 513 study patients 95 died, 89 of them at the hospital, and 6 died at home (death confirmed by BMHC Emergency Unit physicians at patient's home). Of 89 patients who died in Osijek University Hospital, 81 died from from CVD and the remaining 8 from some other underlying disease.

STROKE LETHALITY IN EMERGENCY UNIT IN BARANYA (EAST CROATIA)

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This retrospective study was undertaken to identify the cause of death in patients hospitalized at the Osijek University Hospital, referred by the psysicians from the Beli Manastir Health Center Emergency Unit to the Osijek Department of Neurology for a clinical manifestations of cerebrovascular disease (CVD). From November 1, 1997 (the time of Baranya reintegration after the war) till December 31, 2001, 229 patients with symptoms of CVD were referred to the Osijek University Hospital from Baranya and 89 of them died in hospital. Among these 89 patients, there were 53 men and 36 women, mean age 68,73 years. The majority of patients were in the 61-70 (n=34) and 71-80 (n=34) age groups. The cause of death was determined on the basis of clinical diagnosis, computed tomography finding, and autopsy finding. Stroke, as the cause of death, was identified in 81 deceased patients, with lethality of 38,38%, whereas the remaining 8 deceased patients with the symptoms of CVD died of some other disease (plasmocytoma, glioblastoma, cerebral metestases, fracture of the first cervical vertebra, acute myocardial infarction, acute appendicitis, chronical ishemic heart disease and bleeding gastric ulcer). Out of 81 stroke patients, ischemic stroke was diagnosed in 59 and hemorrhagic stroke in 22 patients. Comparison of referral diagnoses and causes of death showed that of 72 patients referred with a diagnosis of nonspecified stroke, 47 died from ischemic stroke, 18 from hemorrhagic stroke and 7 from other diseases. Out of seven patients referred as ischemic stroke, ischemic stroke was the cause of death in 6 and hemorrhagic stroke in one patient. Out of five patients referred as hemorrhagic stroke, hemorrhagic type was cause of death in 3, ischemic stroke in one and other disease in one patient. In the patients referred with diagnosis of transient ischemic attack (n=1), hypertensive encelophathy (n=2) and late stroke sequel (n=2), the cause of death was ischemic stroke.

AN INVESTIGATION OF THE ANGER LEVELS OF MEDICINE FACULTY RESIDENTS

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This study aims to compare the anger levels of the residents. The study was conducted among 116 residents working at the Çukurova University Medicine Faculty; 62 of the participants were studying at the internal diseases departments and the other 54 participants were studying at the surgery departments. An information sheet was prepared to obtain personal information about the participants and determine the situations which make the residents angry and with whom they become angry at work. a trait anger and expression scale was employed to find out the anger levels of the participants in the study. The study reveals valuable data about the situations which make the assistants angry and with whom they become angry while working at the hospital. The residents working for 2 years in both surgery and internal diseases departments were compared with the ones working more than 2 years throughout the study. A significant difference was observed between the 2 groups with respect to

their trait anger and anger-out levels, whereas no significant difference was seen among the participants regarding their anger-in and control of anger levels the surgery residents who were in their first 2 years were found to have higher trait anger and anger-in levels than both the surgery residents working more than two years and the assistants working for two years at the internal diseases department. Besides with respect to their gender, the participants were seen differ from each other only in their anger in levels. Moreover, male participants were observed to have higher anger-in levels than the female participants. Regarding whether the assistants would like to work in another department or not, a significant difference in favor of the ones who prefer to work in an other department, was found between their trait anger levels. The anger levels of the residents were seen not to differ according to the number of the duties they do. Lastly trait anger and anger-out scores of the residents were found to be close to the average scores that can be received from the subscales, while their anger-in and control of anger scores were above the average scores.

THE TREATMENT OF ADULT EMERGENCY DEPARTMENT SEIZURE PATIENTS

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Objective: The objective of this study was to examine emergency physicians' treatment of adult ED seizure patients. Methods: Data analyzed in this study were from the National Hospital Ambulatory Medical Care Survey. Patient selection was based on ICD-9-CM codes. Results: Patients diagnosed with convulsions accounted for 0.7% of US Emergency Department (ED) visits during 1997-2000; or an estimated 2.9 million visits. Patients presenting to the ED with convulsions were most often Caucasian (66%), male (56%), and the mean age was 44 ± 17. Most patients received an antiepileptic drug (AED) (78%), and the most frequently administered AEDs were phenytoin (38%), lorazepam (10%), carbamazepine (9%), phenobarbital (9%), diazepam (5%), fosphenytoin (4%), and gabapentin (2%). Overall, hydantoins were administered 2.5 times more often than were benzodiazepines (42% vs 16%). Hospitalization was required in 22% of seizure patients, with 3% being admitted to the ICU setting. Patients more than 64 years old were 1.4 times more likely to be admitted (44% vs. 18%, OR = 3.6, p = 0.001), patients receiving benzodiazepines in the ED were nearly 2 times more likely to be admitted (37% vs. 19%, OR = 2.4, p = 0.001) and there was a trend suggesting that patients who received a hydantoin were more often able to avoid hospitalization (19% vs. 24%, OR = 0.7, p = 0.09). Conclusions: Over three-quarters of ED seizure patients received an AED while in the ED, most commonly phenytoin. Patients older than 65 and those who received a benzodiazepine were more likely to be admitted, and there was a trend for patients receiving phenytoin or fosphenytoin to avoid admission.

VISUAL HALLUCINATIONS AND EPILEPTIC SEIZURES CAUSED BY LEVOFLOXACIN

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Neurological side effects of quinolones are rare; we describe the induction of neurological symptoms after levofloxacin treatment of an urosepsis. A 63-year-old female was treated with claritromycin for an urosepsis (fever, chills and urinary tract infection). As she didn't recover she was admitted at our hospital and levofloxacin was started intravenously. Cardiovascular medication was adapted due to a hyponatriemia of 129 mEq/L. 3 days later she got dysphasia and visual hallucinations. Shortly afterwards there was a witnessed collaps and after a hypertonic phase she developed clonic jerks. Fenytoin was started and the patient was transferred to the intensive care unit. Shortly afterwards she got a generalised tonic-clonic seizure, treated with diazepam. Electrolyte disorders were normalised at that time and there were no signs of renal dysfunction. Spinal fluid examination, a broad serological investigation and brain CT were all within normal limits. MRI of the brain revealed some aspecific punctiform lesions with enhanced signal on FLAIR, no arguments for encaphalitis or septic emboli, or tumour. Levofloxacin was withdrawn and replaced by amoxycillin-clavulinic acid. The patient recovered well and was seizure free during the follow up period of six months (fenytoine was stopped after three months). We report a case of induction of visual hallucinations and a generalised tonic-clonic seizure during levofloxacin treatment of an urosepsis. These complications are known but very rare. In the sparse literature high risk factors include old age and renal failure. Of all fluoroquinolones, levofloxacin shows to be the least at risk.

SEIZURE EPISODE AS A SYMPTON OF MEFLOQUINE INTOXICATION

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Introduction: A good medical history with a detailed anamnesis are in most of the cases definitive for the etiology diagnoses of seizures at the Emergency Room. Clinical case: 32 years old Caucasian male who arrives to the Emergency Room after suffering a single episode of tonic-clonic seizures with total loss of consciousness. No remarkable were found except a trip in Kenya the previous month. The patient followed the Mefloquine prophylaxis following the protocol, right dose, right timing. The patient referred a slight asthenia, limb weakness and ostheomuscular pain in the last few days that disappeared with NSAIDS. We also found pain and functional impotence for mobilization both shoulders, slight dysarthria and amnesia of the episode. Blood analysis showed leukocytosis and a CK of 479. At the urine analysis granulose cylinders were found. X-Ray demonstrated a posterior luxation of both shoulders that were resolved with no complications. Rest of the tests were normal. Patient ingressed at the Internal Medicine Department where he had a single fever peak of 38,5ºC without being able to find the origin, blood cultures, TC, EEG and Blood extension were all negative. The enzymes and leukocytosis turned back to normal levels in a short time. The patient was dismissed from Hospital with the diagnosis of Mefloquine intoxication. Conclusions: The ongoing increase of trips to endemic areas for Paludism and the use of Mefloquine as a prophylaxis makes it necessary to learn the possible secondary effects of the drug (nausea, diarrhoea, abdominal pain, dizziness, sleeping disturbances, sensitive and motor neuropathy, seizures, thoracic pain, tachychardia, bradycardia, muscular weakness, myalgias, arthralgias, urticaria, fever, loss of appetite, leukopenia or leukocitosis). Also, it is necessary to make differential diagnosis with Plasmodium infection, for the prophylaxis in completely efficacious and should be useful for differentiating an intoxication by Mefloquine.

INFLUENCE OF CARDIOVASCULAR RISK FACTORS AND MEDICATION ON HOSPITALARY MORTALITY RATE IN ISCHEMIC STROKE

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Objectives: The aim of this study was to determine the incidence of cardiovascular risk factors on hospitalary mortality rate (HMR) in acute ischemic stroke (IS). We also analyzed how anticoagulation and antiaggregation as well as other medication could modify this mortality rate. Materials And Methods: From November 2000 to September 2001 information was collected on patients admitted to our centre with the diagnosis of acute IS. We obtained information about hypercholesterolemia, hypertension (HT), diabetes (DM), tabaquism, atrial fibrillation (AF) and valvular disease (VD) as well as intake of medication. Data obtained were entered into an SPSS 11.0 data base. Descriptive statistics were used to characterize the study results. Results: 490 records were collected with a global HMR of 12.7% (60 patients). 284 patients suffered supratentorial IS, 45 infratentorial IS, 13 patients secondary haemorrhagic stroke and 143 transient ischemic attack (TIA) according to the different types of stroke of the classification made. 49.6% of all patients were women. Other results are shown in tables below.

Hypertension	DM type 1	DM type 2	Tabaquism	AF	VD	Dislipemia
63%	7.5%	24%	17.6%	23.2%	13%	17.7%

Antihypertensives	Antiaggregation	Anticoagulation	Hypolipemiants
58%	35%	9.4%	7.3%

	HT	DM type	DM type 2	Tabaquis	AF	VD	Dislipemia
Decea	7.2%	1.9%	2.7%	1.1%	5.4%	2.4%	1.5%
Alive	56.4%	5.7%	21.3%	16.7%	17.7%	10.7%	16.1%
p	>0.05	0.27	>0.05	0.28	0.00	>0.05	>0.05

	Antihypertensives	Antiaggregation	Anticoagulation	Hypolipemiants
Deceased	8.79%	4.65%	1.26%	0.4%
Alive	3.6%	30.23%	8.13%	6.9%
p	>0.05	>0.05	>0.05	>0.05

HT did not modify the presentation of the stroke, neither did tabaquism. DM was described more frequently in TIA than in other types of stroke. ($p<0.001$) Only 3 of 14 patients who presented a secondary haemorrhagic stroke receive antiaggregation treatment. None of those were given anticoagulant therapy. Conclusions: Most patients who suffered an acute IS had cardiovascular risk factors, commonly HT, DM, AF, VD, dislipemia and tabaquism. One third of all patients had received antiaggregation treatment before being included in this study. DM was involved in an increase in TIA events. Antiaggregation and anticoagulation therapy was not related to an increase on haemorrhage risk in IS.

HOSPITAL MORTALITY IN ISCHEMIC STROKE. A COMPARISON WITH CORONARY ISCHEMIC DISEASE. PREDISPOSING FACTORS

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Objetives: The aim of this study was to determine hospital mortality rate (HMR) in ischemic stroke (IS) and compare those results with HMR in coronary ischemic disease (CID). Methods: From November 2000 to September 2001 an observational, descriptive and retrospective study was conducted analyzing medical records of all patients who were admitted to our centre with diagnosis of IS and CID according to Codification Department. Demographic data, days of admission and final HMR were collected and compared between IS and CID. Mortality rate among the different types of stroke was also compared. Data obtained were entered into an SPSS 11.0 data base. Descriptive statistics were used to characterize the study results. Results: 490 diagnoses of IS and 506 of CID were obtained. HMR in IS reach 12.4% (60 patients) and 3.36% in CID (17 patients). Other results are shown in tables below.

	Male	Global mean age	Deceased mean age	Global HMR	Length of stay
Ischemic Stroke	50,4 % (247)	75,18 yr (36 - 99)	80,18 ± 7,90 (60 - 93)	12,4 % (60)	10,37 days (± 9,82)
Coronary Ischemic Disease	66,2 % (335)	69,86 yr (30 - 93)	75,71 ± 7,10 (64 - 98)	3,36 % (17)	8,57 days (± 5,34)

	Supratentorial IS	Infratentorial IS	Secondary Hemorrhagic	TIA
ALIVES	230 (54,1%)	40 (9,4%)	12 (2,9%)	143 (33,6%)
DECEASED	54 (90%)	5 (8,3%)	1 (1,7%)	0
TOTAL	284 (58,5%)	45 (9,3%)	13 (2,7%)	143 (29,5%)

HRM among the different types of IS differ significantly for the three groups.19% of patients who suffered supratentorial IS, 11.1% infratentorial and 7.7% secondary haemorrhagic IS died. Although females had a mortality rate of 15.5% and males 9.3% there was no statistical difference in HMR according to the gender, even considering that 61.7% of all patients deceased were women. Conclusions: Mortality rate in IS was higher than in CID but this increase could be explained by the higher mean age of patients who suffered IS. Mean age in patients who suffered IS was higher than that observed in CID. Differences in mortality among the different types of IS were observed. No differences in HMR were obtained according to the gender. Progression to haemorrhagic stroke after IS did not carried an increase of mortality.

RETROSPECTIVE DEMOGRAPHIC STUDY OF SUICIDAL PATIENTS IN A UNIVERSITY/ COMMUNITY BASED EMERGENCY DEPARTMENT

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Background: The term suicide is commonly used to refer to a continuum of thought and action that runs from ideation to completion of the act. A complete suicide results in death, where as in attempted suicide the person survives. Objective: A retrospective study of all patients presenting with a diagnosis of suicidal attempt during the year 2000-2001 was conducted to establish a database with description of the characteristics of these patients and their suicidal behavior. Methods: A total of 258 records of patients presenting to the emergency department during the year 2000-2001 with a diagnosis of suicidal attempt were reviewed using a standardized data collection template to obtain information that included, date, time of arrival, sex, age, marital status, occupation, address, number of previews attempts, mode, substance abuse, psychiatric hospitalizations, social history and final disposition. Results: The most common method used was pill ingestion. 57% of the patients evaluated for suicidal attempt were between the ages of 19-39 year old as compared with national data 19-24 years old. Half of the patients did not suffer from

any psychiatric condition. Among the psychiatric disorders, depression predominated at 30% of cases. Most of the patients were evaluated between 6:00pm-12:00am. Half of the patients described that their motive was triggered by problems with a direct family member. Females attempted suicide more than males. Conclusion: Suicide attempts were mainly related to evening and night hours, being female, young, feeling depressed and with having personal problems related to a family member living with the patients.

INJECTABLE ZIPRASIDONE IN THE PSYCHIATRIC EMERGENCY SERVICE

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Objective: Injectable atypical neuroleptics may supplant benzodiazepine and/or butyrophenone alternatives. Published studies of intramuscular (IM) ziprasidone have excluded cases of severe psychiatric agitation (AGIT), as well as agitation from alcohol (ETOH) or other substances (SUBS). Method: We determined BARS agitation scores (min=1, max=7) and duration of physical restraints in a naturalistic study of IM sedatives in our Psychiatric Emergency Service during a 3-month period. Dosages were 20 mg for ziprasidone, and varied for conventional IM sedatives (86% haloperidol and/or lorazepam). Results: Baseline BARS scores were high for AGIT (n=40), ETOH (n=10), and SUBS (n=19) (respective means, 6.5, 6.9, 6.5; P=NS). Ziprasidone decreased agitation scores rapidly (means, 5.7, 5.3, 5.6 at 15 min and 3.2, 3.3, 3.0 at 45 min [P<0.01]). At 2 hr, scores were 2.5, 2.1, and 2.3. For conventional sedatives (n=7), baseline scores were 6.4, 5.4 at 15 min, 3.3 at 45 min, and 2.7 at 2 hr (P=NS from ziprasidone). Restraint duration decreased from 91 ± 4 min to 45 ± 4 min with ziprasidone (P<0.01). Of 17 EKGs, none had prolonged QTc; one dystonic reaction occurred with ziprasidone. Conclusion: Ziprasidone IM appears effective for severe agitation including alcohol- or substance-induced intoxication. It may lead to reduced time in restraints compared with conventional agents.

IM ZIPRASIDONE AND IM HALOPERIDOL HAVE COMPARABLE EFFECTS ON QT_C AT C_{MAX}

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Objective: To characterize QTc effects of oral ziprasidone and haloperidol at three steady-state dose levels. Methods: After tapering and washout of existing antipsychotic therapy, subjects with schizophrenia or schizoaffective disorder were randomized to escalating doses of ziprasidone (40, 160, and 320 mg/day) or haloperidol (2.5, 15, and 30 mg/day) administered over 16 days to attain steady-state dose levels. ECGs were collected at baseline (drug-free condition) and during study drug administration on steady-state days 4, 10, and 16, at estimated Tmax and 1 hour before and after. Samples for pharmacokinetic measurements were collected at estimated Tmax, and telemetry was performed throughout the high-dose period. Results: Mean ziprasidone (n=25) concentrations increased ~6-fold across the 40-320 mg/day dose range, reaching 327 ng/mL at the 320 mg/day dose level. Mean change in QTc from baseline was 4.5 msec at 40 mg/day, 19.5 msec at 160 mg/day, and 22.5 msec at 320 mg/day. For haloperidol (n=23), mean change in QTc was ¨C1.2, 6.6, and 7.2 msec at the 3 respective dose levels. No abnormal telemetry findings or QTc > 500 msec were observed. Conclusions: At twice the recommended daily dose, oral ziprasidone showed marginal QTc increase from 160 mg/day, with no cardiovascular symptoms or QTc > 500 msec.

EFFICACY AND SAFETY OF RAPID-ACTING INTRAMUSCULAR ZIPRASIDONE IN PATIENTS WITH ACUTE AGITATION AND PSYCHOSIS

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Objective: To review results from clinical trials with intramuscular (IM) ziprasidone. Method: Two 24-hour, randomized, double-blind trials assessed ziprasidone IM 10 mg (n=63) and 20 mg (n=41) versus respective 2-mg dose groups (n=54 and n=38) in acute agitation and psychosis. Two open-label, 7-day trials (n=438) compared fixed- and flexible-dose ziprasidone IM with haloperidol IM for up to 3 days and during the transition from IM to oral treatment up to day 7. Results: Ziprasidone IM 10 mg and 20 mg produced rapid, significant, dose-related reductions in symptoms of agitation. Decreased mean Behavioural Assessment Rating Scale (BARS™) scores were seen at 15 minutes after the first dose of ziprasidone IM 20 mg, and were significant compared with ineffective 2-mg doses at 30 minutes (P<0.01). PANSS agitation items scores were significantly lower at 4 hours post-dose with ziprasidone IM 20 mg (P<0.05), and no cases of extrapyramidal syndrome (EPS) or acute dystonia was observed. Reductions in BPRS total, BPRS agitation items and CGI-S scores with flexible-dose ziprasidone IM were significantly greater compared with those for haloperidol IM (P<0.05), and ziprasidone IM was associated with a substantially lower incidence of movement disorders. Both efficacy and tolerability were maintained during and after the transition from IM to oral ziprasidone treatment. Conclusions: Ziprasidone IM is rapid and effective in reducing acute agitation and offers tolerability advantages over haloperidol IM, particularly with regard to movement disorders.

CVA PATINET RESEARCH IN EMERGENCY MEDICINE DEPARTMENT OF RASOOL HOSPITAL

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Objective : comparison of the prognosis of the those with cerebrovascular accident in 200 patient in Rasoul hospital, before and after establishing of emergency medicine in this hospital during 1997-2002 . Methods: The study is observational – descriptive (analytic cross – sectional). Results: the tow group assigned A (After Emergency Medicine) and B

(Before Emergency Medicine). The prognosis for group A included 34 discharge patient in the 24 hours after presentation in the emergency unit while 56 patient were admitted to the ward and 10 subject died . The prognosis in group B was 23 discharge patient in the 24 hours after presentation in the emergency unit while 62 patient were admitted to the ward and 15 subjected . the mean age in group A was 67.31 (SD 11.66) and in group B was 67.64 (SD 11.38). Conclusion: the most prevalent age CVA was more than 50 years old and the more the age, the more the prevalence of the CVA and CVA was more prevalent in male than in female. in the present study HTN and DM follow ups can reduce the CVA significantly. In the analysis of the date, following chi.2 the following was understand: A) In the low group the study couldn't find any significant differents in the discharge during the first 24 hours, admission to the ward and mortality rates. B) The discharge during the first 24 hours in the tow groups for the cases over 50 years old was significant (p= 0.018 which show that the discharge rate in group A was 35.5% in group B with was 20%. In group A the mortality rate was 4% lower, discharge during the first 24 hours had 11% increased and the admission to the ward had 8% lower than group B . lower mortality rate, lower admission in ward and increasing the discharge during the first 24 hours indicates the effective follow ups in the emergency (by emergency medicine) in screening CVA patient.

SPINAL ANESTHESIA IN AN ELDERLY PATIENT WITH CARDIOVASCULAR AND CHRONIC OBSTRUCTIVE PULMONARY DISEASE UNDERGOING EMERGENCY APPENDECTOMY

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Introduction: We examined a female patient, 98 years old, with clinical signs of peritonitis. She had indication for emergency appendectomy. During the preoperative management we found the following: chronic obstructive pulmonary disease (COPD), heart failure - class III and high arterial pressure. She was a grade IV ASA.There was no possibility for postanaesthetic care in ICU, so we did not consider general anaesthesia as a first choice. She had also anatomical abnormalities in her lumbar spine and was very uncooperative, so we did not consider epidural anaesthesia. We decided upon spinal anaesthesia after prophylactic fluid loading. The patient was in the sitting position and the needle inserted by midline approach to L3-L4 interspace. We used bupivacaine 0.5% 3 ml as a spinal anaesthetic agent. The block was extended gradually to T8. Results: During the operation the patient was haemodynamic stable, calm and did not complain of pain. The duration of the operation was 90 minutes, and the patient remained in the recovery room for two hours. The patient survived. Conclusion: Elderly patients are common in routine anaesthetic practice. In these patients there may be relative or absolute contraindications about the kind of anaesthesia. It depends upon the clinical experience of the anaesthesiologist.

PROPOFOL FOR DEEP PROCEDURAL SEDATION IN THE PEDIATRIC PATIENT

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Objective: Numerous procedures requiring sedation for pediatric patients, such as orthopedic reduction, lumbar puncture, diagnostic testing, and laceration repair are carried out by emergency physicians. To achieve a more safe and effective means of sedation than current sedatives provide, we initiated the use of propofol, which has a theoretical advantage of rapid onset of action and a short half-life, in our emergency department. Methods: A prospective collection of case data and complications was done for the initial 40 pediatric patients (age 2 to 12 years) whom had undergone deep procedural sedation with propofol by our nine emergency physicians. Propofol was titrated IV by the physician until the desired level of sedation was obtained, usually level III or level IV. The medication was given without regard to time of last oral intake. Pulse, blood pressure, cardiac rhythm and pulse oximetry were recorded during the procedure and until recovery. The nurses recorded complications. Case data and complications were entered into a database. Hypotension (age appropriate decrease), hypoxemia of pulse ox < 90%, respiratory depression requiring assisted ventilation or intubation, aspiration, airway obstruction, or anesthesia consultation were considered complications Results: Of the 40 patients, 18 received propofol for orthopedic reduction, 7 for lumbar puncture, 10 for laceration repair and 5 for diagnostic testing. All procedures were done successfully and no patient experienced a serious incident. Mean total dose of propofol was 70 mg (median, 65 mg; range, 20 to 190 mg). No patient developed hypotension, hypoxia, bradycardia, aspirated, had airway obstruction, or required intubation anesthesia consultation. Conclusion: Propofol is safe and effective for sedation during procedures carried out by emergency physicians in the pediatric population. Its rapid onset of action, only a few minutes, and short half-life meant that all patients in this study were awake and ready for discharge in 2 to 25 minutes. The emergency physicians used propofol without regard to the patient's last oral intake, but aspiration did not occur in any patient, possibly due to the inherent anti-emetic properties of propofol. A larger study is being done to verify these results.

PROPOFOL FOR DEEP PROCEDURAL SEDATION IN THE EMERGENCY DEPARTMENT

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Objective: Numerous surgical procedures requiring sedation, such as orthopedic reduction, lumbar puncture, chest tube insertion and abscess incision and drainage, are carried out by emergency department (ED) physicians. To achieve a more safe and effective means of sedation than current sedatives provide, we initiated the use of propofol in our ED, which has a theoretical advantage of rapid onset of action and a short half-life. Methods: A retrospective chart review of

case data and complications was done for the first 100 patients whom had undergone deep procedural sedation with propofol by our nine ED physicians. Propofol was titrated IV by the ED physician until the desired level of sedation was obtained, usually level III or level IV. Pulse, blood pressure, cardiac rhythm and pulse oximetry were recorded during the procedure and until recovery. Results: Of the 100 patients, 58 received propofol for orthopedic reduction, 31 for lumbar puncture and 11 for other indications. All procedures were done successfully and no patient experienced a serious incident. Mean total dose of propofol was 155 mg (median, 140 mg; range, 30 to 440 mg). Transient hypotension (SBP<90 mmHg) occurred in 3 patients (95% CI, 0-8.8%). Each patient with transient hypotension responded quickly to normal saline bolus in less than 1 minute and it did not recur. Transient hypoxia (SpO2<90%) occurred in 3 patients (95% CI, 1.8-2%) each of whom required minimal assisted ventilation and they regained the ability to maintain adequate oxygenation without assistance in less than 1 minute. Complications were unrelated to gender, age or the ED physician. No patient required intubation, aspirated, had airway obstruction, bradycardia, or required anesthesia consultation. Conclusion: Propofol is a safe and effective sedative for use in deep surgical procedures carried out by ED physicians. Its rapid onset of action, only a few minutes, and short half-life meant that all patients in this study were awake and ready for discharge in 2 to 45 minutes. Complications were uncommon; they developed in only six patients. The 3 patients who developed transient hypotension and the 3 patients who developed hypoxia all responded quickly to minimal medical management. The ED physicians used propofol without regard to the patient's last meal, but aspiration did not occur in any patient, possibly due to the inherent anti-emetic properties of propofol. Comment: To our knowledge, this is the first study to investigate propofol use by ED physicians for sedation in deep surgical procedures that allows them to adjust the dose of propofol according to the patient's response and the level of sedation appropriate to carry out the procedure. Propofol should be considered a first line sedative agent for ED physicians and it should no longer be considered "an anesthesiologist only" drug.

PAIN TREATMENT PROTOCOL FOR RADICULAR COMPRESSION

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We propose a pain treatment protocol for the management of radicular compression patients in the emergency room of Luis Razetti University Hospital. This treatment includes Fenitoin: 18 mg/kg unique dosage intravenously. After, Gabapentin (900 mg/day po) plus Sertraline (50 mg/day po) plus Celecoxib (400 mg/day po). We made a prospective study, aleatory, double-blind in 137 patients with radicular compression syndrome (RCS) from 2000 (January) to 2002 (December). The patients had monitoring for 20 months, with de visual-analog scale (EVA), obtaining a EVA scale of 1,088 in experimental group (p=0,006;) improvement in motor function of 97,66% (p=0,0001), and no significant adverse effects during the study. We conclude that the pain treatment protocol in radicular compression will be an important alternative treatment for pain management of RCS patients.

ANALGESIC USE IN EMERGENCY DEPARTMENT PATIENTS WITH FRACTURES

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Objective: The objective of this study was to examine Emergency Department (ED) treatment of pain in patients with fractures. Methods: Data analyzed in this study were from the National Hospital Ambulatory Medical Care Survey. Patient selection was based on ICD-9-CM codes. Results: From 46,725 patients analyzed from the years 1999 and 2000 fractures represented an estimated 8.4 million, or 4%, of US ED visits. The mean age of patients presenting to the ED with fractures was 39 ± 26 years, 54% of these patients were male, and 74% Caucasian. Patients most frequently presented to the ED in moderate (25%) or mild (20%) pain. Pain medication was given to 64% of patients, and an oral medication was used for 64% of these patients. Administration of narcotics occurred in 42% of patients, and 16% received nonnarcotic pain medication. The most frequently administered medications were ibuprofen (16%), hydrocodone (15%), acetaminophen (10%), meperidine (8%), and codeine (6%). Patients presenting with severe or moderate pain were 15% more likely to be administered pain medication than patients with less pain (aOR = 1.4, $p < 0.01$) and these patients in severe or moderate pain were more likely to receive a parenteral medication (aOR = 2.4, $p < 0.01$). Patients 65 years old or more (aOR = 3.9, $p < 0.01$), patients in severe or moderate pain (aOR = 1.9, $p = 0.01$), and patients receiving a parenteral narcotic (aOR = 3.0, $p < 0.01$) were more likely to be admitted. Patients under 15 years old (aOR = 0.4, $p < 0.01$) were less likely to be admitted. Conclusions: ED patients with fractures frequently receive a pain medication. Although, elderly patients, patients in severe or moderate pain, and patients receiving parenteral narcotics were more likely to be hospitalized, children most often could be managed without hospitalization.

RENAL COLIC PATIENT PAIN MANAGEMENT IN THE EMERGENCY DEPARTMENT

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Objective: Patients with renal colic experience significant pain upon Emergency Department (ED) presentation. The objective was to analyze the factors that predict ED pain management. Methods: Patient selection was based on ED logbook diagnoses of renal, ureteral, or unspecified urinary calculi and hydronephrosis. Charts of patients seen in the ED from 6/20/01 through 6/11/02 in three urban EDs were retrospectively reviewed. Patients less than 18 years old were excluded. With the use of the visual analog pain scale, 8-10 was considered severe, 4-7 as moderate, and 1-3 mild pain severity. Results: Of the 132 patients with renal colic who presented to the ED, 61% were male, and the mean age was 44 ± 16 years. Patients reported severe (66%), moderate (14%), and mild (5%) maximal pain severities while in the ED. The majority of patients (86%) received a pain medication; 79% received a nonsteroidal anti-inflammatory (NSAID), 42% received a narcotic, and 36% received a narcotic and a NSAID. A parenteral medication was given to 84% of patients while in

the ED. Of the 256 medications administered to these patients, the most commonly given were ketorolac (41%), morphine (25%), phenergan (7%), and meperidine (7%). There was a trend for patients in severe or moderate pain to receive a pain medication (82 vs 77%, OR = 2.2, p = 0.27), a narcotic (45 vs 27%, OR = 2.3, p = 0.14), an NSAID (82 vs 65%, OR = 2.4, p = 0.11) and a parenteral medication (85 vs 77%, OR = 1.8 p = 0.41). Of the 109 (83%) patients discharged home from the ED, 79% received a narcotic prescription. Conclusions: Patients presenting to the ED with renal colic are most often in severe pain and receive a parenteral NSAID. Due to anticipated ongoing pain, patients with this painful condition are aggressively treated despite pain severity. Most patients discharged from the ED received a prescription for a narcotic.

ANALGESIC USE IN EMERGENCY DEPARTMENT PATIENTS WITH ABDOMINAL PAIN

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Objective: The objective of this study was to examine Emergency Department (ED) treatment of patients who present with the complaint of abdominal pain. Methods: Data analyzed in this study were from the 1999 and 2000 National Hospital Ambulatory Medical Care Surveys. Patient selection was based on 18 ICD-9-CM codes related to complaints of abdominal pain. Results: From the 3,785 patients analyzed, abdominal pain and associated disorders represented an estimated 17 million, or 8%, of US ED visits. In this group, 62% were female, 75% Caucasian, and the mean age was 37 ± 24 years. The most common final diagnoses were nonspecific abdominal pain (49%), gastroenteritis (22%), and gastritis or duodenitis (11%). Of the 52% of patients evaluated for pain severity, 31% reported mild, 39% moderate, and 17% severe pain. Overall, administration of pain medication occurred in 37% of patients, with 53% of pain medications being given orally. Narcotics were given to 22%, and nonnarcotics were administered to 16% of patients. The most frequently administered medications were promethazine (15%), meperidine (9%), and acetaminophen (8%). Patients presenting with severe or moderate pain were 53% more likely to receive a pain medication (49% vs 32%, aOR = 1.8, p < 0.01), 89% more likely to receive a narcotic (34% vs 18%, aOR = 1.4, p < 0.01), and 29% more likely to receive a parenteral medication (49% vs 38%, aOR = 1.4, p < 0.01). Patients receiving a parenteral narcotic were 1.1 times more likely to be admitted (40% vs 19%, aOR = 5.2, p < 0.01). Conclusions: The majority of abdominal pain patients treated in the ED do not receive any medication for pain relief. Patients presenting with severe or moderate pain are more likely to receive a pain medication, especially a narcotic and to receive a medication via the parenteral route. Patients receiving a parenteral narcotic were more likely to be admitted.

ANALGESIC TREATMENT AT DISCHARGE FROM EMERGENCY UNITS

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Acute pain is the most common cause of consultation at Emergency Departments. Analgesia is a fundamental aspect in the integrated management of the patient who goes to the Emergency Departments. The treatment of acute pain remains unsatisfactory despite advances in pain research and the publication of numerous guidelines. Objectives:

1. To describe the prevalence of analgesic treatment at the discharge from Emergency Units.
2. To describe the characteristics of given analgesic treatment.
3. To analyse if analgesic treatment changes depending on the characteristics of pain and type of population.

Materials And Methods: Descriptive transversal study. Patients were evaluated at the beginning of the management in 15 Regional Hospitals of Spain, members of the Emergency Study Group of Regional Hospitals (GEMUHC). The research was carried out over three periods of 24 hours. Patients were evaluated by a pain questionnaire and the Visual Analog Scale (VAS) was used to measure pain intensity. Results were analysed by a descriptive and analytic method. Results: The results have been expressed both in percentage and in terms of number of cases in which that variable was studied. The total sample consisted of 3575 patients who went to Emergency Units. 49.8% were men and 50.2% were women. The average age was 39 years (DE: 24.5). Pain was the main cause of visiting the Emergency Unit in 52.3% of the cases and 59.6% of the patients said that they had pain when they were asked about it. A total of 1897 (89%) patients were discharged from the Emergency Unit (n=2130) and 1543 (76%) patients were prescribed medication upon leaving (n=2027). 1182 (78%) patients who attended solely for pain were prescribed medication and 300 (21.8%) patients were discharged without any prescription (n=2130). Drugs most prescribed were ibuprofen (23%), metamizol/dypirone (14.1%), paracetamol (14%), diclofenac (8.9%) and ketorolac (8.4%). Opioids were only prescribed in 2.5% (n=1541). Patient age was the only socio-demographic variable significantly related to the type of medication (p=0.000). For patients over 65, paracetamol was the most prescribed. Prescription was also significantly related to certain pain characteristics, which were; intensity of pain (p=0.000), duration of pain (p=0.01) and type of pain (p=0.046). When the intensity was higher than 7 on the VAS, then metamizol/dypirone (27.9%) and two or more medications (23.6%) were the most given. In chronic pain, paracetamol (7.1%) was the most used drug and in acute pain, continuous pain and resting pain the most given medication was metamizol/dypirone. Ibuprofen was the most prescribed in traumatic pain and pain with inflammation. Depending on patients individual case-histories; other pathologies (p=0.000), previously prescribed medication (p=0.000) or the presence of gastric pathology (p=0.000), the medication given upon discharge was significantly different. In these cases the most prescribed medication was metamizol/dypirone and paracetamol. Conclusions:

- Most patients evaluated in Emergency Department are finally discharged from them.
- Pain characteristics, patient age and patient case-history were the variables related to analgesic treatment at discharge.
- There was a large number of patients who were discharged from Emergency Units without analgesic treatment.
- Most prescribed medications are in the First step in the WHO Analgesic Ladder
- The use of opioid analgesics at the discharge from Emergency Departments was very low.

COMPARISON SEDATIVE EFFECT OF ETOMIDATE AND FENTANYL COMBINED ADMINISTRATION DURING CLOSED THORACOSTOMY AND REDUCTION OF JOINT DISLOCATION

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Purpose: As a sedative hypnotic agent, etomidate has a few side effect like respiratory depression and has excellent phamacokinetic and hemodynamic properties. The objective of this study is to compare etomidate's sedative effect in the case of closed thoracostomy and in the case of reduction of joint dislocation undergoing emergency treatment. Methods: Subjects with dislocations which needed a reduction, and subjects with respiratory problems which needed a closed thoracostomy, from May 1, 2002 to February 28, 2003 were enrolled in this prospective study. Thus, we evaluated 56 patients. Patients were randomized to receive intravenous boluses of etomidate (0.2 mg/kg) prior to fentanyl(1.0 ug/kg) during PSA(procedural sedation and anesthesia). We recorded; transcutanous oxygen saturation, blood pressure, respiratory rate, pulse rate, degree of sedation, satisfaction of sedation and side effects after administration at intervals of 5, 10, 15 minutes. Results: Of all the patients, significant hemodynamic, as hypotension or bradycardia etc, and respiratory depression, as apnea or tachypnea etc, were absent. In comparing the two groups, significant clinical problems and statistics were not different, the degree of sedation was fast and effective. Conclusion: We conclude the combined administration of etomidate and fentanyl during PSA is safe and very effective. Therefore we suggest that the usage of etomidate would be extended not only reduction of joint dislocation but also closed thracostomy.

RESPIRATORY ARREST AFTER LOW-DOSE FENTANYL

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This paper reports the first case of respiratory arrest after administration of a subtherapeutic dose of fentanyl. A 31-year-old man was brought to our emergency department (ED) after being struck in the left face. His only complaint was severe pain in the area of injury. He denied any alcohol use. Physical examination was normal except for signs of left maxillofacial trauma, including malar flattening, periorbital ecchymosis and edema, diplopia on left eye medial gaze, marked malar tenderness, and palpable inferior and lateral orbital rim step-off deformities. Computed tomography of his head and face demonstrated a tripod fracture of the left zygomatic body, orbital floor fracture, fracture of the anterior, posterior, and medial walls of the maxillary sinus. He was given 50 mcg of fentanyl IV for pain, and two minutes later, respiratory arrest ensued. He was immediately ventilated by bag-valve-mask and given naloxone IV, after which spontaneous respirations resumed and he fully recovered. His blood alcohol level was subsequently found to be 144 mg/dl. IV fentanyl should be administered with caution in the ED, since even a subtherapeutic dose can cause respiratory arrest in patients with unsuspected mild alcohol intoxication.

A STUDY OF CHILDREN ADMITTED WITH POISONING IN A DISTRICT GENERAL HOSPITAL. COULD EMERGENCY MEDICINE OBSERVE THESE PATIENTS?

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Objectives - To determine whether there is a greater role for emergency medicine in the management of childhood poisoning. To determine recent trends in childhood poisoning locally and compare with national trends. To determine the efficacy of child resistant containers in children of different age groups. Methods – Information was collected prospectively on all children presenting to the emergency department with poisoning for a 4 month period 1st March - 1st July 2001 as well as phone-calls to the department regarding advice. Children of different ages were tested in their ability to open a child resistant container. Inpatient information was collected for the preceding seven years 1st January 1994- 1st January 2001 to determine trends. Results - Most childhood poisoning admissions to paediatrics of are of low toxicity in the clinically well child with a short length of stay. Only 23% of children are discharged directly from the emergency department. Advice given over the phone was often reassurance (60%) and this service reduced parental anxiety and avoided unnecessary attendances. None of the children younger than 4 years were able to open the child resistant container although all those greater than 8 years were. There has been a decline in admissions both locally and nationally since 1997. Conclusions – There is a role for emergency medicine in the management of childhood poisoning. This would be in large departments with a substantial paediatric workload, with nursing and medical staff trained in paediatrics. This would avoid duplication of work, reduce inpatient admissions, further reduce the length of stay for the children, it would reduce hospital costs although it would have training and workload implications for emergency medicine. Telephone advice effectively reduces workload and parental anxiety. Child resistant containers are effective for pre-school children. The decreasing trend of admissions can be explained by primary prevention campaigns by ROSPA, the child accident prevention trust as well as a higher threshold for admission by emergency doctors.

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A FATAL OUTCOME OF SPONTANEOUS INTRACRANIAL HAEMORRHAGE IN A CHILD WITH IMMUNE THROMBOCYTOPENIC PURPURA (ITP) – A CASE REPORT

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Intracranial haemorrhage in a child with ITP is extremely rare but could present as a life-threatening complication. The case of a 5-year-old girl suffering from ITP in the course of EBV infection has been described. On admission: generalised cutaneous and mucous petechiae; thrombocytopenia (<10 G/L); abdominal ultrasound: enlarged spleen (9.8 cm length). Basing on the clinical course, laboratory findings and bone marrow aspiration the diagnosis of ITP has been proved. ANA, anti-dsDNA and anti–SM were negative. The level of immunoglobulin was within the normal range. EBV infection had been confirmed. Upper and lower gastrointestinal tract bleeding episodes and extremely low platelet count (0-6 G/L) in past 4 weeks necessitated administration of steroids (2 mg/kg for 5 days p.o.), i.v. immunoglobulin (IVIG) (400mg/kg/day for 5 consecutive days), intravenous pulses of methylprednisolone (20 mg/kg/day for 3 days) simultaneously with IVAG (1 g/kg/day for 3 days) without any clinical improvement. During the episodes of bleeding high dosage of fresh platelet concentrations were administered. The child was seen on regular basis at the Haematology Outpatient Department. During the consecutive 2 months a spontaneous increase of platelet count up to the level of 24 000 has been observed. A week later, overnight, the child presented with speech disturbances, loss of consciousness and seizure. The child was admitted to the pediatric ward where she experienced a cardiac arrest. Resuscitation successful. CT scan confirmed massive intracranial hemorrhage at the platelet level of 1 G/l. High doses of platelet concentration, i.v. pulse of methylprednisolone (20 ml/kg) and 2 g/kg IVAG were administered without improvement of serum platelet count. Three days after admission the child died in ICU. The authors would like to underline the extremely rare incidence of intracranial haemorrhage in a child with ITP (caused by EBV infection) and fatal course of this complication despite aggressive treatment.

LOW RISK OF MENINGITIS IN INFANTS AGED 8 TO 16 WEEKS WITH URINARY TRACT INFECTION

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Background: It is controversial whether all infants aged 8 to 16 weeks with a urinary tract infection (UTI) require a routine lumbar puncture (LP) to rule out meningitis. Objective: To determine whether infants 8 to 16 weeks of age with a urinary tract infection have a significant risk of concurrent meningitis. Methods: A retrospective chart review was carried out on all infants between the age of 8 and 16 weeks who were admitted to the Children's Hospital of Eastern Ontario between December 1989 and December 1997 with the diagnosis of UTI. Results: Two hundred and nine infants with UTI were identified of which 76 had lumbar punctures. None of the 76 infants had evidence of meningitis by a positive cerebrospinal fluid (CSF) culture. Only 5 of the 76 infants were bacteremic, each having E.coli grown on blood culture. The symptoms of irritability, poor feeding and lethargy were not significantly different between bacteremic and non-bacteremic infants (P= 0.4, 0.27 and 0.23 respectively). None of the 133 infants with a UTI but without an LP on admission developed signs of meningitis during their hospital stay. Conclusion: Lumbar punctures have a low yield in infants 8 - 16 weeks of age presenting with a UTI. Future studies should define the clinical and laboratory parameters of the small number of infants with UTI that do require an LP.

WHAT DO PARENTS KNOW ABOUT FIRST AID IN CHILDREN

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Injury is the leading cause of death in children in the UK. Simple first aid can reduce the severity of an illness or injury, but previous studies have shown that parental knowledge of first aid is poor. Objectives: To ascertain levels of prior training and current knowledge of first aid among parents * To identify any relationship between first aid knowledge, training and demographics Design A questionnaire was given to parents and guardians of children attending Accident and Emergency and Outpatient departments at the Royal Hospital for Sick Children, Edinburgh (RHSC) over an 8 week period. The data collected comprised demographics, previous first aid experience and responses to six scenarios requiring first aid. Main Outcome Measures * Knowledge of first aid as required in six different scenarios. * Prior first aid training. Results 203 completed questionnaires were analysed. First aid knowledge was poor, with respondents achieving on average 31% of the maximum score. 44% had done a first aid course in the past. The total number of children in the family, and having done a first aid course before were found to be significant factors in predicting first aid knowledge. Conclusion First aid knowledge among parents is poor. The number of children in the family, and having attended a first aid course can be used to predict first aid knowledge. Undertaking a first aid course improves knowledge and there is scope to improve opportunities and availability of these courses. Prior first aid training correlated with the scores achieved.

CLINICAL DIAGNOSIS OF STREP THROAT IN PAEDIATRIC A&E: AUDIT OF JUNIOR DOCTORS' PERFORMANCE AND LOGISTIC REGRESSION ANALYSIS OF SYMPTOMS

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Background: Sore throat is a very common reason for presentation to paediatric emergency services. If Rapid Antigen Tests are not readily available, antibiotic treatment is often started based on clinical examination alone in order to reduce

the risk of suppurative complications and of transmission to others. Aims: To evaluate clinical diagnosis of Strep Throat by junior doctors, compared to Rapid Strep Test (RST) ± Throat Culture in paediatric A&E. To assess the relative contribution of different clinical features to the diagnosis of Strep Throat. Methods: From January to March 2003, 213 patients (Male/Female: 110/103; mean age (± SD): 3.85 years (± 3.15)) attending our Paediatric Emergency department with clinical signs of pharyngitis were enrolled. Negative RSTs were backed up by throat culture. Doctors were asked to complete a questionnaire before knowing the result of RST. The questionnaire also assessed 14 clinical features commonly associated with Strep Throat. Sensitivity, specificity (95% Confidence Interval), likelihood ratios (LR) and post-test probability were calculated for the clinical examination. Clinical features were analysed using backward stepwise logistic regression. Results: Follow-up was complete and questionnaires were available for 115/213 (54%) patients. 21 patients were positive for Strep Throat (18.3%). Sensitivity of clinical diagnosis alone was 12/21 or 57% (34% - 78%) and specificity 67/94 or 71% (61% - 80%). Positive LR was 1.96 and negative LR 0.60. Post-test probability was 30%. Of the surveyed clinical features only history of sore throat, rash and pyrexia were contributing to the diagnosis of Strep Throat ($p < 0.05$). Conclusions: Clinical examination by junior doctors is of limited value in the diagnosis of Strep Throat. Only history of sore throat, rash and pyrexia contributed significantly to the diagnosis of Strep Throat.

ATTITUDES TO ANALGESIA USE IN CHILDREN

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Analgesia provision has been reported to be suboptimal in children in several different studies worldwide. Before change can be implemented reasons for this under-provision need to be explored. Objectives- To assess current attitudes with regard to the provision of analgesia for children with acute severe pain in Accident and Emergency departments within the United Kingdom. Design/methods- Prospective telephone survey of senior (consultant or middle grade staff) from 50 A&E departments within the UK using a standardised structured questionnaire. The questionnaire consisted of 10 questions designed to give a broad overview of analgesia use in the paediatric population. Results- 17 (34%) departments questioned do not currently have a written policy for the management of pain in children in A&E. 13 (26%)of departments questioned do not perform pain testing in children with painful conditions. 15 (30%)departments questioned currently prescribe intranasal diamorphine for children with acute severe pain. Of the 39 (78%)departments using morphine for acute severe pain 28(72%) prescribe it orally. All 50 departments would prescribe intravenous opiods for adults with acute severe pain in similar circumstances. Conclusions- Our study shows a lack of uniformity with regards to analgesia provision for children in A&E despite guidelines from the BAEM, and distinct underprovision for children.

OPIOD ANALGESIA USE IN A PAEDIATRIC ACCIDENT AND EMERGENCY DEPARTMENT:LESSONS FOR THE FUTURE

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Analgesia provision in accident and emergency (A&E) departments has been reported to be inadequate, with children least likely to receive adequate analgesia. Objectives- To assess the use of opiod analgesia within our department and identify shortcomings with a view to modifying our protocol and training for analgesia in children with acute severe pain. Design/Methods - Retrospective audit of morphine prescription for acute severe pain in children presenting to A&E from April 1st 2002 to 31st March 2003. Results- 338 (1%) of children presenting to A&E received morphine for acute severe pain. 244 (72%) were male. The median age of children prescribed morphine was 8.7 years. The median time from arrival in A&E to receiving morphine was 16 minutes with a range of 2 minutes to 190 minutes. 163 (53%) children had been physically weighed prior to morphine prescription, 171 (46%) had the weight estimated and 4(1%) had no weight documented. 74 (24%) of children were prescribed an incorrect dose of morphine, but none had documented adverse effects referable to overdosage. However 31(9%) children required further morphine whilst in A&E. 13 (42%) of these had previously received a low dose of morphine. 284 children, (83%) receiving morphine required admission to hospital. Conclusion- our study provides evidence to show that acute severe pain in children is still being managed badly with 24% being prescribed an inappropriate dose of morphine. Specific teaching in how to calculate analgesia dosage for treatment of acute severe pain in children, for all junior staff working in A&E is recommended.

RAPID STREP THROAT TEST IN PEDIATRIC A&E: AUDIT O ITS USE A ASINGLE DIAGNOSTIC TOOL?

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Rapid diagnostic tests for streptococcal pharyngitis have made the diagnosis at once simpler and more complicated. The American Academy of Pediatrics(AAP) recommends that all negative rapid streptococcal tests (RST) be confirmed by a follow-up throat culture1. Patient follow-up can be difficult in the setting of an emergency department. Aims: To evaluate RST as a single diagnostic tool, compared to RST ± throat culture, in a paediatric A&E department. Methods: From January to March 2003, 213 patients (Male/Female: 110/103; mean age (± SD): 3.85 years (± 3.15)) attending our Paediatric Emergency department with clinical signs of pharyngitis were enrolled. Throat swabs were taken and analysed by experienced nursing staff using Quickvue+ Strep A Test. Negative RSTs were backed up by throat culture. Prevalence, sensitivity, specificity (95% Confidence Interval), likelihood ratios (LR) and post-test probability were calculated. Results: A total of 201 patients were analysed (12 patients did not have follow-up throat culture sent). Positive results (RST or throat culture) were obtained in 33 patients. RST correctly identified

21 cases. 11 samples were false-negative on RST. One weakly positive RST was negative at follow-up throat culture. At Strep Throat prevalence of 15.9%, sensitivity of RST was 21/32 or 65.6% (46.8% - 81.4%) and specificity was 168/169 or 99.4% (96.7% - 99.9%). Positive LR was 109.3 and negative LR 0.346. Post - test probability was 95.4%. Conclusions: The high specificity of RST in our study greatly increases the post-test probability, facilitating early diagnosis of Strep Throat. However, the low sensitivity of RST does not support its use as a single diagnostic tool. 1. American Academy of Pediatrics, Committee on Infectious Diseases. Group A Streptococcal infections. In: The Red Book. Elk Groove Village, IL: American Academy of Pediatrics;2000;526-536.

ED MANAGEMENT TO METABOLIC EMERGENCIES IN UREA CYCLE DISORDERS

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Urea cycle enzyme defects are known to produce life threatening metabolic disorders. These disorders may present at any age with a variety of different clinical scenario's e.g. mimicking sepsis, irritability, hyperactivity etc. The most common major metabolic derangement seen is the elevated serum ammonia levels associated with CNS toxcity. Hyperammonemia results in lethargy, depressed level of consciousness, cerebral edema, and if inadequately treated ultimately coma and death. Aggressive resuscitation in the first hour is needed to reverse the ongoing metabolic crisis and its devastating effects. Due to the rare nature of these disorders their various aspects of clinical presentations and acute management of hyerammonemia in an ED setting have yet to be well defined. We present data collected during 28 episodes in 14 patients with urea cycle disorders who presented to our emergency department as metabolic emergencies. Methods: A total of 28 episodes in 14 patients known to have urea cycle disorder presenting to our ED were reviewed. Patients were aged between 4 months- 8 yrs. Decreased activity was the chief presenting complaint in 23/28 episodes, followed by irritability in 5 episodes. Poor oral intake, fever, coryza ranging from 1-2 days was other associated symptoms. The most common physical finding was lethargy, which was present in 22/28 episodes. The initial vital signs were heart rate 167±20 bpm, respiratory rate 38±7/min, temp 37.8±0.8 C. Laboratory investigations showed an initial ph 7.29 ± 0.08, Bicarbonate was 21 ± 2.8 mmol/l, anion gap was 13.8 ± 3.3, Blood glucose 3.1± 0.7 mmol/l, and serum ammonia (NH3) was 208 ± 36.4 umol/l. Patients were aggressively treated for hperammonemia and associated dehydration within their first hour of arrival to ED. The treatment regimen included: fluid bolus 20-30ml/kg, dextrose 1 gm/kg, NaHCO3 0-1mEq/kg, Arginine 100-600mg/kg. Results: In all patients the level of consciousness' and cardiopulmonary status improved appreciably post resuscitation. All patients survived the metabolic crisis episode. Early aggressive resuscitation was associated with rapid improvement in their clinical condition. They were all discharged home after 4-6 days of inpatient care. Conclusion: Patients with urea cycle disorders are at increased risk of metabolic decompensation with or without a recognizable cause. Hyperammonemia is the major metabolic derangement in these disorders resulting in brain damage, coma and death. Early recognition and aggressive management with arginine, fluids and sodium bicarbonate within the first hour in ED can significantly reduce the morbidity and mortality associated with these metabolic crises.

THE BENEFITS OF INTRANASAL DIAMORPHINE IN THE INITIAL MANAGEMENT OF PAINFUL SICKLE CELL CRISES SHOULD NOT BE SNIFFED AT!

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Introduction: Obtaining venous access to administer intravenous (IV) opiates is difficult, distressing and frequently results in delayed analgesia in sickle cell crises. (A mean time to IV analgesia of 72 min was recently demonstrated by internal audit). Intranasal (IN) diamorphine can provide fast acting opiate-analgesia without the need for venous cannulation. The aims of this study were to assess the efficacy of IN diamorphine in acute sickle crises and to evaluate its safety profile, before developing a new sickle cell management protocol. Method: 18 children with painful crises were recruited in two 3-month phases. In phase one, patients only received IN diamorphine (0.1mg/kg) at presentation whereas in the second phase patients received a combination of IN diamorphine (0.1mg/kg) with oral morphine (400mcg/kg). Time to analgesia, serial pain scores and patient acceptability scores were recorded, documenting serial cardiac and respiratory observations and noting any side effects. Results: Patients received analgesia within a mean time of 15 minutes and, by 30 minutes, significant improvements in pain scores had been recorded in all but one child. Eight minor side effects were reported - 3 children reported localised nasal irritation, 3 had mild nausea, 1 reported dizziness (but was normotensive throughout) and another had generalised itchiness. No significant cardiorespiratory side effects were reported. When questioned, each child stated that they would choose IN diamorphine in the future, scoring it as 86% effective in relieving their pain acutely. Conclusion: IN diamorphine provided prompt and adequate analgesia with minimal adverse effects. The combination of oral and intranasal opiate is now our "first-line" analgesia in managing sickle pain.

MYOCARDITIS VERSUS ACUTE MYOCARDIAL INFARCT, AN ADOLESCENT PRESENTATION: CASE REPORT AND REVIEW OF LITERATURE

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Background: Chest pain is the chief complaint of about 6/1000 children who present to the Emergency Room (ER) or walk-in clinics. Several prospective studies had found that the majority of cases are benign and that only about 4% bear a cardiac etiology. A detailed history and physical examination should direct the use of a chest x-ray (CXR) and electrocardiogram (ECG) for further evaluation. Method: A retrospective chart review and review of the literature was conducted. Results: A 12 year-old girl without pertinent medical history and non illicit drug use presented to the ER complaining of intermittent oppressive chest pain episodes. She had history of a viral illness 1 week prior to the first ER evaluation. Physical exam was unremarkable but for mild sternal tenderness. An ECG showed ST elevation 1mm on inferior and high

lateral leads and cardiac enzymes were elevated. The initial evaluation was performed at a community hospital and management of possible myocardial ischemia was started. Once in a tertiary institution, a cardiac catheterization showed normal coronary arteries with vasospasm and moderate mitral regurgitation. A clinical assessment of peri-myocarditis was made. Although an endomyocardial biopsy was not performed for definitive diagnosis, Coxsackie virus group B and Echovirus type 30 titers were positive and reinforced the diagnosis of myocarditis. Conclusions: As emergency physicians it is important to identify cardiac or other pathologically-caused chest pain, as the symptoms on presentation may be mild but the condition may be associated with significant morbidity and mortality.

DO CHILDREN KNOW THE DESIGN DRUGS

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Background: Design drug or synthesis drugs, are a little bit different substances in their molecular structure than the drugs they are derived from, but produce similar effects for the central nervous system. Their continuous and ascendent protagonism is due to among other factors : (1) high increment in the seizure quantities, (2) the circumstances surrounding the consumption (youths and teenagers), (3) the increase of its consumption at parties, weekends and general celebrations, and (4) its relationship with traffic accidents in highways (motorways kamikaces) Objectives: (1) to describe the school age population's knowledge about these drugs - years of start to consume, guidelines of consume, and how easy it is to get them. (2) to use the database, to support educational, social and medical strategies, to prevent this consumption among the children. Material and methods: Distribution of forms among the educational centers at the rural zones and urban zones of Zaragoza (Spain) between 11 and 16 years old. Results: After the analysis of 1000 anonymous investigation, we found there was no significant difference between the replies at the urban and rural zones, or between the public and private centers. There was no significant difference between girls and boys answers. The main difference was related to the age of the kid, so this is the variable about which we must design strategies for prevention. Conclusions: The high increase of the design drugs consume among the young people is a high worried motive in all the European countries. As any other prevention program, the information on the toxic effects produced by the consumption of these drugs, pose us as first point to take into account, to know the best moment to inform effectively to prevent the start of the consume.

FACTORS AFFECTING DECISION TO REFER IN CHILDREN UNDER 5 ATTENDING A&E WITH PYREXIA

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Objective: The aim of this study was to determine what factors affected A&E clinicians' decision to refer children attending A&E with pyrexia. Methods: We included all children between 1 month and 5 years of age, who attended A&E at Epsom General Hospital over a 1 month period (between 27/4/3 and 26/5/3) with a pyrexia of 38 degrees Celsius or above. Patients who had been directly referred to the pediatrics department were excluded from the study. Results: Over the study period, 404 children aged 5 and under attended the A&E department, excluding direct pediatric referrals. Of these, 36 met the inclusion criteria for the study. The children were aged between 3 months and 5 years, 18 were male and 18 female. Diagnoses included croup (3), URTI (8), LRTI (1), tonsillitis (2), otitis media (3), UTI (2), allergic reaction (1), chicken pox (1), febrile convulsions (5) and fever without source(9). 14 / 36 children were referred to pediatrics, of whom 7 were admitted. 9 / 18 male and 5 / 18 female children were referred. Diagnoses in those children referred were croup (2), URTI (4), febrile convulsions (4) and fever without source (4). Average age in the children referred was 23.9 months, (range 3 - 53- compared to 29.0 months (range 3 - 61 months) in the group discharged from A&E. Average temperature was higher in the group who were referred (38.9 C, range 38.1 - 40.2) than in the group discharged (38.6C, range 38.0 - 39.5). Failure of temperature to drop below 38 degrees Celsius with antipyretics was also more common in those children who were referred (4/12, compared to 3/18 in those not referred), although this was not checked in all children. Conclusions: Thus it appears that the decision to refer is affected by a number of factors, including initial temperature, failure of temperature to fall after antipyretics, age of child, male sex and eventual diagnosis. However, there are no absolute factors which determine decision to refer other than a first febrile convulsion. A larger study is therefore needed to determine the statistical significance of the above factors in determining decision to refer.

UMBILICAL VEIN CATHETERIZATION - EMERGENCY MEDICINE RESIDENTS TRAINING

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BACKGROUND: Umbilical vein catheterization (UVC) is an important access in newborn resuscitations. Training and skills maintenance are difficult because of infrequent clinical necessity. OBJECTIVES: To determine if UVC skills improve and are retained after training using a UVC model and instructional video. METHODS: The vein of a discarded cord was infused with a red colored solution pH 5. The arteries were infused with a red colored solution of pH 7. Residents were silently critiqued during UVC before and after viewing the video. Exclusion criteria - residents with prior experience with UVC. Inclusion criteria no previous experience or UVC training with the video a year previously. RESULTS: No previous UVC. Previously trained with a UVC model and video . Residents with no previous UVC training: Identification of umbilical vessels: 78% before the video vs. 100% after. Purse-string placement 0% before vs. 67% after. Cutting of the cord to appropriate length: 11% before vs. 78% after. Advancing of catheter 22%(2/9) before vs. 67% after. Recovery of fluid pH5 (verification of UVC) 56% before vs. 78% after. Residents with previous training: Identification of umbilical vessels: 90% before vs. 100% after. Purse-string placement 50% before vs. 70%. Cutting of the cord: 70% before vs. 100% after. Advancing of catheter 70% before vs. 100% after. Recovery of fluid pH5 (verification of UVC) 80% before vs. 100% after. CONCLUSIONS: Skills in UVC may be im-

proved with an UVC model and an instructional video. Resident UVC skills are retained after training.

A MODEL FOR TRAINING UMBILICAL VEIN CATHETERIZATION

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BACKGROUND: Umbilical vein catheterization (UVC) is an important method for peripheral access in the newborn resuscitation. It is a skill typically learned in the neonatal intensive care unit but infrequently used in emergency medicine. Training or maintenance of UVC skills becomes difficult with the absence of a training model or paucity of clinical indications. OBJECTIVES: To develop a model for training and maintenance of UVC skills. METHODS: Anonymous discarded human umbilical cords were recovered from Labor and Delivery. The placenta end of the chord was incised. The vein and 2 arteries at the opposite end of the cord were cannulated. The 2 arteries were infused with a reddish solution with a pH of 7. The vein was infused with a reddish solution with a pH of 5. The cut ends draining the reddish fluid were presented for cannulation to 20 pediatric attendings and residents who were competent in UVC. The endpoint was successful cannulation with confirmation of an effluent of pH 5. After cannulation, the residents and attendings were asked to make an assessment of adequacy for training. RESULTS: 100% (20/20) attempts at cannulation were successful on the first attempt at cannulation. 100% (20/20) judged the model as adequate for training of UVC. CONCLUSIONS: This model using discarded umbilical cords may be used for training of umbilical vein catheterization. LIMITATIONS: nonliving tissue, small sample.

ATRAUMATIC BLADDER PERFORATION. DIAGNOSTIC IMPASSE

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Introduction: Multiple treatment modalities have been developed for the management of neurogenic bladder in the last few decades. The initial management was urinary diversion or an indwelling catheter, both of which had long term complication e.g. renal dysfunction, infection, stone formation etc. Recently clean intermittent catheterization and bladder augmentation have received worldwide acceptance for the management of neurogenic bladder. Multiple studies have shown the clinical efficacy of this approach in reducing the rate of complications and improvement in quality of lifestyle. Spontaneous bladder rupture is a rare life threatening complication of these procedures and poses a diagnostic dilemma to an ED physician. We present 3 cases of spontaneous bladder rupture. All 3 patients aged (7-13 yr) had neurogenic bladder. They had undergone augmentation enterocystoplasty to achieve increase bladder capacity and were managed with clean intermittent catheterization. These patients presented to ED initially with nonspecific abdominal pain. In addition one had a poor appetite and the other had vomited twice. There physical exam and laboratory investigations were within normal limits on 1st visit. All were discharged home with instructions to return if any change was noticed. Subsequently all 3 returned with signs of peritonitis. Cystogram studies confirmed the bladder perforation. In 2 cases conservative management was adequate however third patient needed to undergo surgical repair. Conclusion Diagnosis was delayed in all 3 cases 1-2 days. The insidious onset of the condition constitutes a dilemma for an early recognition and aggressive management to reduce the mortality associated with this condition. Disscussion: High index of suspicion is required to diagnose a nontraumatic ruptured bladder. There should be a low threshold to perform sonography or cystogram studies to rule out this condition.

HORMONAL CHANGES IN ACUTE ORGANOPHOSPHATE POISONING

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The aim of the present study was to determine the effects of organophosphates on endocrine system particularly pituitary hormones. A Total of 44 patients were included in the study. Nineteen of 44 patients were males and 25 were females. The mean age of the patients was 28.5±12.6. Thyrotrophin (TSH), free triiodothyronine (FT3), free thyroxine (FT4), follicle stimulating hormone (FSH), luteinizing hormone (LH), prolactin (PRL), progesterone (PRG), adrenocorticotropic hormone (ACTH), cortisol and testesterone (TST) levels were obtained from the patients before and after the treatment. ACTH [Before treatment: 557,8±753,8 pg/mL, after treatment: 49,0±31,8 pg/mL (p=0,001)] cortisol, [Before treatment: 41,8±24,0 µg/dL, After treatment: 14,4±7.3 µg/dL (p=0,001)] PRL, [Before treatment: 23,8±18,8 ng/mL, After treatment: 14,0±12,4 ng/mL (p=0,001)] FT3, [Before treatment: 3,35±0,93 pg/dL, After treatment: 2,9±0,7 pg/dL (p=0,02)] FT4, [Before treatment: 12,7±11,8 ng/dL, After treatment: 13,1±19,2 ng/dL (p=0.05)] FSH, [Before treatment: 6,9±7,8 mIU/mL, After treatment: 4,4±2,6 mIU/mL (p=0,004)] progesterone [Before treatment: 2,7±3,4 ng/mL, After treatment: 0,9±1,4 ng/mL (p=0,001)] levels were statistically significant before and after treatment. Sick euthyroid syndrome was determined in 6 patients on admission. Eleven patients who were diagnosed euthyroid on admission, were determined to have sick euthyroid syndrome after the treatment. Hypothyroidism was determined in one patient on admission and it lasted after the treatment. In conclusion; It has shown that ACTH, cortisol, PRL, FT3, FT4, FSH, and PRG levels have been affected in acute organophosphate poisoning and this may be related to the effects of neurotransmitters, direct effect of these compounds and stress caused by intoxication.

CORONARY EVENT CONCURRENT WITH CENTIPEDE ENVENOMATION: CASE REPORT AND REVIEW OF THE LITERATURE

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Introduction: The present case is the first one with ST segment elevation due to probable coronary vasospasm following a centipede envenomation. Case report: A 60 year-old

man presented to the Emergency Department (ED) because of right toe pain after being bitten by a centipede of 12 cm in length within approximately one hour. Past family history, social history and coronary artery disease history were noncontributory. Physical examination was normal except for minimal uvular oedema and swelling of his right toe. The patient had not been diagnosed to have any kind of ischemic heart disease nor had any relevant symptoms except for minimal back pain with exercise. After peripheral IV access was obtained, the patient had diaphoresis, dizziness, hypotension and bradycardia. His ECG revealed inferior wall myocardial infarction. The patient's blood pressure was 89/60 mmHg, pulse 47 bpm, respirations 28 breaths/min. In the following hours, ECG findings (i.e. 2-mm inferior ST segment elevations and 1-mm ST segment depressions in DI and aVL) had disappeared and turned to the baseline. The patient denied having chest pain or any equivalent symptoms. Since the cardiac markers turned out to be normal in the 13th hour after the bite, the patient underwent exercise stress testing, which was also negative. Conclusion: Adult patients with centipede envenomation should be closely monitored in anticipation of myocardial ischemia due to vasospasm, hypotension and myocardial toxic effects of the centipede venom.

METHEMOGLOBINEMIA CAUSED BY THE NITROFENOL DISINFECTANT: A CASE REPORT

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Introduction: Methemoglobinemia is an uncommon but life-threatening event associated with various conditions. Disinfectant ingestion may also play a role in the etiology. We describe, herein, a case with toxic methemoglobinemia who ingested the nitrophenol (kreolin=AE) with the purpose of suicide. Case report: A 20-year-old woman was admitted to the emergency department due to unconsciousness. On arrival after a 9 hour-travel to the hospital, the patient had a Glasgow Coma Scale Score of 14/15 with accompanying cyanosis and pupillary constriction. Methemoglobin level was 35.4% and peripheral pulse oximetry was 83%. Intravenous access was established and 100% oxygen was given via a face-mask. Fluid replacement and antioxidant therapy (vit C: 60 mg/day) was started. Methylene blue could not be given since it was not available. After 4 hours of therapy, the cyanosis was decreased, and methemoglobin level was decreased to 27.8%. After 36 hours, the patient was completely recovered and methemoglobin level turned to normal limits. Conclusion: Immediate recognition and prompt treatment of the disorder are essential to decrease morbidity and mortality. Therefore, although it is extremely rare, this entity should be taken into consideration when a severe cyanosis with unknown etiology.

REVIEW OF SEAFOOD POISONINGS

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Seafood Poisonings are seen worldwide. Symptoms can range from mild gastroenteritis to life threatening conditions. Since seafood is exported world wide, poisonings endemic to one part of the world can potentially be seen anywhere. This lecture will educate physicians on a variety of seafood poisonings. We will review the mechanism of illness, symptoms, treatment and prevention of these poisonings.

A NEW PANDORA'S BOX IN THE EMERGENCY DEPARTMENT: ACUTE ABDOMEN IN ORGANOPHOSPHATE POISONING

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Objective: To evaluate the clinical course of patients with carbamate and organophosphorus poisoning admitted to the emergency department (ED), with special emphasis on acute abdominal conditions. Methods: The records of 20 consecutive adult patients (12 females) intoxicated with carbamate and organophosphate compounds in a 6-month period were examined. Signs and symptoms were recorded. Abdominal ultrasonography (USG) was performed in 12 patients with abdominal pain. Results: The mean age of the patients was 30 ± 14.1 years. The meantime from poisoning to admission was 6.7 ± 7.13 hours. The patients and relatives denied ingestion of any additional drugs. The offending agents were uniformly ingested by mouth in all cases. The mechanisms of poisoning were accidental ingestion in 3 patients and suicidal in 17. Muscarinic findings were identified in 12 cases. Other findings were less frequent (i.e. central nervous system depression in 9, fasciculations in 4, marked hypotonia in 2 and tachycardia in 4 patients). Moderate to severe abdominal pain were noted in 12 patients. USG revealed abdominal free fluid in 7 patients. Massive abdominal free fluid was observed in one case. Three cases had moderate collections at the right and left lower quadrants, and two had only minimal fluid at the right lower quadrant. Three of the seven patients were pregnant (15%); two had intrauterine dead fetus. One fetus also exhibited abdominal free fluid by USG. The pregnant patients underwent therapeutic abortion. Pancreatitis and peritonitis ensued in a 25 year-old male (amylase=750 U/L). Gastric lavage was performed and 1 g/kg activated charcoal was administered to all cases. Atropine was titrated to effect in all patients with muscarinic signs (mean total dose 13.75 ± 6.75 mg). All patients recovered without sequelae within 14 days. Conclusion: Patients with a diagnosis of organophosphate poisoning, in particular cases with suspect abdominal findings, should undergo abdominal USG.

ULTRASTRUCTURAL CHANGES IN LIVER AFTER ACUTE ORGANOPHOSPHATE POISONING AND AFTER TREATMENT

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The present study was performed to investigate the ultrastructural effects of methamidophos on liver. Experiment was carried out with male wistar-albino rats, grouped into 4 groups: Group I (n=10) was administered 30 mg/kg methamidophos, group II (n=7); was administered serum physiologic, groupIII (n=10); was administered 30 mg/kg methamidophos and treated

with pralidoxim and atropine when cholinergic symptoms appeared, group IV; was administered serum physiologic in equal injection amount with group III. Plasma cholin esterase assay were made by RIA. Liver tissues were prepared for electron microscopic studies. It was established that separate methamidophos treatment of rat in group I led to serious chenges in hepatocytes and organelles, where as these changes were not seen in group III. In Group I, it was seen that the chromatin content of some hepatocyte nucleuses had increased, cytoplasmic density increase and also these cells were observed to have gained vacuolar appearance due to lysis in the matrix of mitochondrias. In some cells, the lipid content had increased and covered the majority of cytoplasma. Furthermore, these cells were seen to be surrounded by glycogen accumulation. In some areas of perisinusoidal region (zone), collagen fibers had increased and formed bands. All of these changes disappeared in group III. These findings showed that acute organophosphate poisoning cause serious effects on liver but these changes are reversible with suitable treatment strategy on time.

MUSHROOM POISONINGS IN CENTRAL ANATOLIA BETWEEN 1991 TO 2002

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Objective: The aim of the study is analysis of the cases who presented to our university hospital emergency department (ED) with mushroom poisoning (MP). Method: The cases who presented to our emergency department and diagnosed as MP between 1991 to 2002 were evaluated for demographic, clinical, laboratory data. Results: 223 cases enrolled in the study. Ages were between 1 and 87 (mean: 33.45,b20.93). June (95 cases, 42.6%) was the most common presenting month. 214 cases were suffered from natural mushrooms (NM), and 9 cases from cultivated mushrooms (CM). The most common first noticed symptoms were from gastrointestinal system (GIS) (145 cases, 65%). 168 cases (75.3%) were admitted to the hospital. Hospitalization period was 1 - 59 day (mean: 3.24,b5.25). 10 cases showed mortal progression, and 4 cases showed complication (renal failure). All 14 cases ate NM. 11 of 14 cases presented in September and October ($p<0.001$). 13 of 14 cases noticed GIS symptoms first ($p=0.029$). Conclusion: Most of the mortalities and complications were determined at September and October with NM. Most of the patients with serious outcomes noticed GIS symptoms first. Cultivated MP did not show any bad outcome.

PATIENTS WITH FALLS, CORRELATION OF BLOOD ALCOHOL LEVEL WITH INJURY. WOULD SERUM/BREATHE ALCOHOL BE A USEFUL INVESTIGATION?

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Objective: To determine whether there is a significant difference in the pattern and severity of injury sustained during falls in patients who have consumed alcohol and those who have not. To determine how pattern and severity of injury correlates with blood alcohol level [BAL]. Method: A prospective quasi-randomised controlled study between November 2001 and July 2002. All healthy adults between 16 and 60 years who had fallen from standing height were included. A systematic history and examination allowed calculation of injury severity scores as per abbreviated injury scale update 1998. BALs were obtained from intoxicated patients with consent. Results: 351 healthy adult patients were included in the study, there were 238 in the no alcohol group,113 had consumed alcohol and blood alcohol levels were obtained for 47. The alcohol group had a higher incidence of head injuries{46(48%)v22(9%)) with a lower incidence of limb injuries {39(39%)v183(76%)} than the no alcohol group. There was a significant difference in the pattern of injury between the alcohol and no alcohol groups (X^2, $P<0.001$) and there was a significant difference in the injury severity scores ($P<0.001$, Z -2.5). In the alcohol group severity and pattern correlated with alcohol level at the time of injury. Patients with an alcohol level<200mg/dL had mostly soft tissue limb injuries (58%), 200-250 mostly significant limb fractures (55%) and >250 mostly significant head injuries (90%). Conclusions : Alcohol related falls are more often associated with severe craniofacial injury. The severity of both limb and head injury is greater and correlates directly with BAL. Serum/breathe alcohol may be useful investigation in determining forces involved and with 300mg/dL an indication for computed tomography scan of the brain.

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INGESTION OF CAUSTIC SUBSTANCES BY ADULTS: RETROSPECTIVE ANALYSES OF PATIENTS ADMITTED TO EMERGENCY DEPARTMENT BETWEEN JANUARY 2000 AND JUNE 2003

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Caustic products are responsible for the most serious cases of poisoning which are always emergency cases. Household products containing are alkalis, acids and detergents are the responsible for the most injuries which each having varying injury patterns and anatomic distribution. Early signs and symptoms after caustic ingestion are not consistent with the extent of damage and endoscopy is the only reliable method to assess injury. In this paper we reviewed demographic features and endoscopic results of the patients admitted to a university emergency department with the history of caustic ingestion between January 2000 and June 2003.

ISOLATED BILATERAL RECURRENT LARYNGEAL NERVE PALSY; AS A UNIQUE COMPONENT OF INTERMEDIATE SYNDROME IN ORGANOPHOSPHATE POISONING

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Introduction: Following the acute cholinergic phase of organophosphate poisoning, the isolated vocal cord paralysis only reported rarely before should be excluded as a cause of dyspnea or respiratory distress. We describe a case of bilateral vocal cord paralysis (BVCP) in a patient with clinical recovery from the acute cholinergic crisis, the cause of which was considered to the neurotoxicity due to persistent cholinesterase inhibition in the intermediate syndrome by organophosphate poisoning. Case: A Dichlorvos-poisoned woman was admitted with severe cholinergic crisis and her mental status was coma. She was treated with high dose atropine and pralidoxime and required assisted ventilation with intubation. Approximately 72 hours after insecticide ingestion, cholinergic signs nearly disappeared but mechanical ventilation supports still remained because she had a mild aspiration pneumonia and weak self-respiratory efforts. On day 4, extubation was carefully performed. The patient progressively complained of dyspnea and dysphonia although no required re-intubation. Laryngeal electromyography (LEMG) combined with laryngoscopic examination showed that both vocal cords remained stationary in the paramedian position, signifying BVCP due to bilateral recurrent laryngeal nerve palsy. Thereafter, clinical signs and symptoms of BVCP were gradually recovered with time. On day 17, her vocal cord movements finally resumed to normal on the fiberoptic laryngoscopy and she was discharged at 20 days after organophosphate ingestion. Follow-up for a period of one month did not reveal further neurological sequelae.

CEREBROVASCULAR ACCIDENT FOLLOWING MDMA INGESTION

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Cerebrovascular accident (CVA) in relation to 3,4-methylenedioxymethamphetamine (MDMA, ecstasy) is rare and little is known about the pathophysiology.3-4 An updated report from Drug Abuse Warning Network (DAWN) showed that emergency department visits for MDMA dramatically increased from 2,850 to 5,542 between 1999 and 2001.6 This case report describes a 20-year-old male who reportedly ingested MDMA and subsequently had a cerebrovascular accident. His brother reported witnessing the patient drinking beer, smoking marijuana (THC) and taking MDMA prior to a rap concert. During the concert, the patient suddenly stopped performing, was taken back stage, started vomiting, and became aphasic. In the ED, the patient was extremely combative but moved all extremities equally. His initial neurological examination showed aphasia but equal, reactive pupils, no facial droop, no nuchal rigidity, and down-going Babinskis. After repeated exams, the patient developed new right-sided weakness, left-sided facial droop and hyperreflexia in lower extremities bilaterally. A magnetic resonance image (MRI) of the brain showed left middle cerebral artery complete infarction (Figure 1). A magnetic resonance angiogram (MRA) of the brain showed mild to moderate stenosis of distal left internal carotid artery. Ecstasy can present with several serious toxidromes during an ED visit. A common presentation includes tachycardia, hypertension, mydriasis, agitation, bruxism, muscles aches, dry mouth and seizures.1 A case report from the United Kingdom cites a 35-year-old male who presented with hemiparesis and dysphasia 36 hours after MDMA use.3 Some recent articles suggest a relationship between serotonin release and the down-regulation of serotonin receptors to the development of vasoconstriction in the cerebral vasculature. 2,3,10 This case report also suggests an association between MDMA ingestion and cerebrovascular accidents. Unfortunately, data from the DAWN reports have repeatedly confirmed that the use of MDMA among young adults is on the rise in the United States. Emergency physicians must be aware of the numerous toxidromes possible and include CVA in the differential diagnosis for any young adult with MDMA ingestion.

NALOXONE IN PRE-HOSPITAL THERAPY OF OPIATE OVERDOSE

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Opiate type of addiction, particularly due to heroin abuse, is common among drug addicts. Most of the street heroin is "cut" with other substances. Heroin users do not know the actual strength of the drug or its true contents and are at risk of overdose or death. Analysis of pre-hospital interventions in cases of opiates abuse-induced toxicity in the Zagreb City

(area of 600 km2 and population of approximately 950,000) was performed for the period of January 1, 1999 to December 31, 2002. Data were collected from medical records of the Zagreb Emergency Medical Service (EMS) for cases of opiate intoxication receiving naloxone. Diagnosis was based on clinical findings, fresh needle tracks and history of substance- abuse. EMS teams responded to a total of 219,283 emergencies, 858(0.5%) of which were due to opiate abuse. Naloxone was administered in 315 patients with 8 lethal outcomes. EMS teams most often intervened following a call coming from the residence, for a 22-year-old male, most frequently occurring on Friday around 9 p.m. in April. Coma, bradypnea and pinpoint pupils were found accompanied by hypoxia (SaHbO2 >85%) and tachycardia (>100/min). Treatment included airway control, artificial breathing with supplemental oxygen and i.v. naloxone at the total dose of 0.4-0.8 mg. Most of the patients were transported to hospital. The arrival time of EMS team was 11 minutes and duration of intervention 34 minutes. Diagnosis of opiate intoxication should be considered in a comatose patient with impaired respiration. Patients with clinically significant respiratory compromise require treatment with naloxone. Known or suspected addicts should receive small, titrated doses to reverse respiratory depression without precipitating withdrawal. Due to short naloxone half-life, hospital observation for several hours is necessary. Structured approach to patients with opiate overdose prevents complications and most often eliminates the need for prolonged hospital treatment.

SEVERE HYPERMAGNESEMIA, INTESTINAL PERFORATION, AND DEATH AFTER MAGNESIUM CITRATE INGESTION

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Background: Hypermagnesemia is commonly characterized by progressive loss of neuro-muscular, respiratory, and cardiovascular function. Death is usually due to cardiorespiratory arrest. Less commonly mentioned, hypermagnesemia may cause an acute paralytic ileus. Magnesium becomes elevated in patients who have renal insufficiency, or in the presence of normal renal function, from increased absorption from the GI tract, either from a hypomotility syndrome and / or from ingestion of large amounts of magnesium containing cathartics. We describe the first reported death of a patient who developed an intestinal pseudo-obstruction and subsequent perforation as a complication of hypermagnesemia after the ingestion of Magnesium citrate. Case Report: A 67 year-old man with a history of lung cancer with metastases to the brain and COPD presented to the ED with abdominal pain. Over several days the patient had ingested large amounts of Magnesium citrate for constipation. In the ED he was alert but appeared dusky and had shallow labored respirations. Initial VS: BP=130/50 mmHg, P=114 bpm, T= 35.8°C, PO2 sat = 89% on 100% O2. PE: dry mucous membranes, decreased breath sounds at the right lung base, diffusely tender and distended abdomen without the presence of bowel sounds, minimal motor strength and reflexes. Laboratory data: K+ = 4.5 mEq/dL, Cr=0.9 mg/ml, Mg++ 9.2 mg/dL, arterial pH=7.12, pCO2= 65 mmHg, pO2 =93 mmHg, WBC=21,900/mL with 31 bands. ECG showed a QTc of 465 ms. His chest-XR revealed free air under the diaphragm. His treatment included intubation, fluid resuscitation, broad-spectrum antibiotics, and IV calcium and both surgery and nephrology consultations. Within hours after admission the patient had a cardiac arrest and died. Conclusions: The ingestion of large amounts of Magnesium citrate may cause hypermagnesemia. Hypermagnesemia may have contributed to the intestinal pseudo-obstruction, perforation and the death in the patient presented.

MAD HONEY POISONING IN TURKEY

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Introduction: Plant poisoning is one of the most reported exposures to the poison centers. Toxicity with grayanotoxin may occur from eating grayanotoxin containing plants or contaminated honey (mad honey) which is produced from its flowers or nectars by bees. This article represents, the symptoms, findings and treatment of four adult patients who were poisoned after eating honey and came to Gazi University Hospital Emergency Department. Case Report: Between November 2001 and February 2003 four patients' data with history of mad honey poisoning were reported retrospectively. The patients ate approximately 50-300 grams of honey which they called as mad honey or peppery honey. 60-180 minutes later than eating honey the patients had nausea, vomiting, weakness, diaphoresis and confusion. We determined sinusal bradycardia (40-50 beats per minutes), hypotension (60-90 mmHg systolic blood pressure) and in an ECG there was left bundle branch block pattern with sinusal bradycardia which wasn't present earlier. Their cardiac markers, liver and kidney function tests were normal. None of the patients had a history of cardiac drug use. In treatment all patients were treated with Atropine 1mg iv and one patient was treated with 1 mg Atropine and dopamine. One patient received no drug and treated with only normal saline. 12 hours after eating honey the patients started to recover and after the observation of 18-36 hours, all patients got well. Conclusion: In the patients presenting to the emergency departments with the complaints of nausea, vomiting, weakness, confusion, bradycardia and hypotension if they don't have an organic disease and drug use honey poisoning must be considered.

CARBON MONOXIDE POISONING IN TURKEY

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Introduction: Carbon monoxide is a colorless, tasteless, odorless and non irritating gas. Exposure to carbon monoxide can be accidental or a method of suicide. It is a preventable cause of morbidity and mortality from poisoning. As carbon monoxide poisoning results in diffuse tissue hypoxia normobaric or hyperbaric oxygen therapy is essential. Methods: We wanted to conduct a retrospective evaluation of patients presenting to Gazi University Hospital Emergency Department with carbon monoxide poisoning between 01.01.02 and 30.04.03. Age, way of poisoning, signs, symptoms and treatment were reported from Emergency department (ED) patient forms. Results: 146 patients were evaluated. 46 (31.5%) of the patients were male and 100 (68.5%) were female. The mean age was 26.74 ± 15.47. 64 (44%) of the patients came to the ED between 06-12 p.m. All of the patients were exposed to carbon monoxide accidentally. Most of the patients came to ED with a history of using stove (39 patients (32.8%)). 68 (47.2%)of 144 patients complained of headache. 51 (35.7%) of 144 patients had syncope, 7 (4.9%) seizure, 64 (44.4%) nausea. Mean carboxyhemoglobin value was 25.40 ± 12.14. There wasn't statistically significant difference between CoHb levels and having hypoxemia or not (t-test, p>0.05). Between syncope and CoHb levels statistically significant relation was reported and syncope was most commonly

seen among patients having CoHb levels of 30 and over (c2 , p<0.001). Most of the patients presented to ED during winter months. 116 (80.6%) of the patients were discharged, 17 (11.8%) were interned to services. 127 (88.2%) patients didn't take hyperbaric oxygen therapy. 14 (11.8%) had taken hyperbaric oxygen therapy. Conclusion: Carbon Monoxide poisoning was seen during winter months and exposure was accidental. Serious symptoms were seen among patients having increased CoHb levels. Data wasn't enough and more clinical studies were required.

SUICIDE AMONG HEALTHCARE WORKERS: IV SELF INJECTION OF PENTHAL SODIUM

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Objective: In Turkey; 1592 suicide deaths were reported in 1997, 18.6 % of them related with chemicals. Stress and depression are seen frequently among healthcare workers and this may lead to drug abuse and suicide. There is evidence from several countries that female nurses are at high risk of suicide. We aim to drew attention that; healthcare workers which are at high risk of suicide may result their attempts with death because they knew much about and can easily reach effective drugs. Materials: In this case we reported a nurse self taking penthal sodium by iv route as a method of suicide. Results: A 35 years of female nurse was found unconscious at the cardiovascular surgery operation room drugstore. Intubation and cardiopulmonary resuscitations was performed. After 3-5 minutes she had responded to resuscitation and interned to intensive care unit with mechanical ventilation support. She had no history of any disease or drug use. As learned, on the day of the event she had said that she would have taken iv antibiotics and had an iv line which was opened by her friends. When she was found there was a 50 cc injector containing 2 cc yellow liquid near her. She was treated for 30 days at the intensive care unit and then cardiac arrest was seen. Penthal sodium was found. in the liquid found near her, her gastric content and blood. The mode of the death was reported as suicide by iv penthal sodium and the mechanism of death was multiple organ failure because of penthal sodium intoxication in autopsy report. Conclusion: Stress is thought to be a risk factor for suicide. There is fivefold increase in risk of suicide in the high stress group. The major stressors are ethical conflicts about patient care, workload, organizational deficits, team conflicts on healthcare workers. It must not be forgotten that especially female physicians and nurses have higher suicide risks. It must be kept in mind and the directors and team members must be aware of reality.

CASE REPORT: "LIQUID PMA" INTOXICATION?

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Introduction: Paramethoxyamphetamine (PMA), a so-called designer drug, is related in chemical structure and pharmacological properties to the better known methylenedioxymetamphetamine (MDMA or Ecstasy). PMA is structurally most similar to mescaline, explaining its greater hallucinogenic properties. PMA is more potent than MDMA, especially in inducing extreme hyperthermia, resulting in several lethal cases. PMA is sold as ecstasy in comparable tablets. However, we present a case of serious poisoning with different amphetamines, including PMA, but the patient testified to have consumed a brownish liquid substance. Case: A 25 year old male was brought to the ED being aggressive and having psychotic signs. Arriving in the ED, the patient was in status epilepticus. The pulse rate was 163 BPM and the blood pressure was 110/70 mmHg. The central temperature was 41.6 C° and the patient was sweating excessively. Supportive therapy was promptly started. An urgent CT-scan of the brain, which was negative, and a toxicological screening were performed. The clinical picture correlated with an amphetamine overdose. The toxicological analysis confirmed cannabinoids, MDA, MDMA and PMA. GHB was negative. The patient recovered without neurological deficit. The main curiosity was that the patient stated that he had ingested one light brown and one dark brown viscous but liquid substance. Until today, no other case of liquid PMA has been reported. Conclusion: We were not able to confirm the existence of a liquid PMA solution, however there is minimal doubt on the specific description of the liquid that the patient reported. The liquid could not have comprised GHB, since this analysis was negative. In the literature there is no evidence about a liquid formulation of PMA. This may be the first report on a novel formulation of PMA.

SPONTANEOUS PNEUMOMEDIASTINUM AND MYOCARDITIS FOLLOWING ECSTASY USE

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Ecstasy is a widely used recreational drug. Hyperpyrexia, renal failure and rhabdomyolysis are well known complications. We describe a rare complication. The police brought a young male to our department as he was acting strange in a park. Drug abuse was suspected. We saw an agitated, disoriented patient with a tachycardia of 130bpm and facial flushing. After diazepam IM he became co-operative. Temperature was 37.4°C with a tension of 134/95 mmHg. Remarkable were precordial crepitations. ECG revealed a sinus tachycardia and a pneumomediastinum was seen on the plain thoracic X-ray; this was confirmed on CT scan. Lab revealed a normal leucocytosis with a raised CRP (3). Creatine kinase (CK) was elevated (897U/L) with a raised MB activity (16.8U/L).Troponine I was within normal limits like as the renal function. Toxicology was positive for methamphetamine. Patient was admitted with IV fluid therapy. He admitted the use of XTC and alcohol. The next morning his Troponine I rose to 7.1 ng/ml with a CK of 1023 and a CK-MB activity of 53.8. There were diffuse, slight ST elevations on the ECG, compatible with pericarditis. Echocardiography was difficult due to the mediastinal air and MRI revealed myocarditis. X-ray findings and cardiac enzymes normalised the following days. There were no signs of renal impairment. Spontaneous pneumomediastinum (SPM) is known in inhalation drug users. They try to create autopeep, and hence better alveolar resorption, with forced valsalva maneuvers. This can lead to alveolar air leakage,pneumomediastinum and even pneumothorax. The clinical course is usually benign. SPM after XTC ingestion is rare. The physiopathology remains unclear but the air leakage is probably caused by the long and strenuous dancing that is associated with XTC use. Emergency physi-

cians should be aware of the risk for SPM after ingestion of recreational drugs, especially in case of neck emphysema, swallowing complaints, thoracic pain or crepitations.

APHRODISIAC DRUG -INDUCED HEMOLYTIC ANEMIA

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Volatile alkyl nitrites ("poppers") have been used during the last decades for "recreational purposes", and for intensifying sexual experience. Their use has been associated with methemoglobinemia and hemolysis. We describe three patients who presented over the past year with acute hemolysis after inhalation of butyl nitrite, two of them had glucose-6-phosphate dehydrogenase (G6PD) deficiency. The main clinical features were jaundice that developed between three to seven days from nitrite use, absence of splenomegaly and mild to severe hemolytic anemia that required blood transfusion in one of the patients. The peripheral blood smear showed bite cells. "Poppers" have been sold under many names to circumvent the clear intent of the law. Volatile nitrites, or "rush", "snappers", or "poppers", as they are commonly known in the streets are powerful oxidizing agents and hemolysis can also occur in the face of overwhelming oxidant stress even when the erythrocyte mechanisms to withstand such stress are intact. Because of the route of administration it is very difficult to control the dose and to ascertain that no dangerous quantities are inhaled. "Poppers"-induced hemolytic anemia has rarely been described, despite its common use and powerful oxidizing activity. This low occurrence is even more puzzling in Israel where class II or Mediterranean type of G6PD deficiency predominates. In these patients red cells of all ages are grossly deficient in G6PD and thus, susceptible even with small amounts of an oxidizing substance. Underestimation of the occurrence of "poppers"- induced hemolytic anemia is probably related to its surreptitious use and poor medical knowledge. Alkyl nitrites are not mentioned as a cause of hemolytic anemia in G6PD deficiency in medical textbooks Conclusions: 1) Liquid rush should be included in the list of drugs that patients with G6PD deficiency should refrain from. 2) In patients with acute hemolysis of unclear etiology and bite cells in the peripheral smear, alkyl nitrite use should be considered and 3) Physicians and public health officials should be alerted to the presence and use of alkyl nitrites.

NEW PRODUCTS, OLD PROBLEMS

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Levosulpiride is a new sulpiride. It's the left turning enantiomer of the classical sulpiride with a therapeutic effect at half a dose and thus a better tolerance. These new products are also at risk for misuse. We present an autointoxication with this product, to our knowledge and following the poison centre the first one described. A 34-year-old male, member of the Special Forces, tried to commit suicide in his camp by taking 28 tablets of Levopraid 100mg, a brand new levosulpiride. He used no other drugs or alcohol. He was treated for a depression following social and professional problems and was known with a borderline personality. As he refused any help the prehospital medical team was sent. They saw a man in serious psychic distress, hemodynamically stable. At least he could be convinced to go to the hospital for treatment a few hours after ingestion.Clinical examination and routine lab tests were normal at admission. ECG revealed a normal sinus rhythm with a slightly prolonged QTc time (480 msec). After active charcoal treatment he was admitted to the intensive care department for further monitoring. MgSO4 was administered preventive, no Q-on-T events or torsades de pointes were registered. A few hours later he developed painful dystonic movements of the tongue and jaw musculature, succesfully treated with an anticholinergicum IV. There were no further events and after 24 hours he was transferred to a hospital near his home for further treatment. Sulpirides are members of the substituted benzamides, specific antagonists of the D2 receptors. The levo-form blocks in low doses selective the presynaptic receptors with an antidepressive effect. In higher doses it has a postsynaptic blockage with an antischizofrenic effect. As the therapeutic dose of this product is much lower than the classical sulpirides one could expect a high toxicity in overdose. Our patient however had mild signs and symptoms (typical neuroleptic side effects) that were easy to treat.

DOES INTERLEUKIN-10 ADMINISTRATION AFFECT HISTOPATHOLOGIC CHANGES INDUCED BY ORGANOPHOSPHATE INTOXICATION IN RATS?

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Organophosphate intoxications (OPI) generally cause severe clinical pictures. Treatment includes two major components: supportive care and antidote administration. The aim of this study is to investigate if administration of interleukin-10 (IL-10) , a cytoprotective substance with known cytoprotective properties, can diminish or prevent histopathological changes induced by experimental organophosphate intoxication in rats. Thirteen rats were divided into 3 groups, each consisting of 10 rats – sham, study, and treatment groups. Lebacyd was the agent used to induce OPI. The rats in group 1 did not receive any agent during the experiment. In the group 2, 6 mL/kg of lebacyd was given intraperitoneally (i.p.) 30 minutes and 3 hours later. In the group 3, 6 mL/kg of lebacyd was given i.p., followed by 2 mcg/kg IL-10 i.p. 30 minutes and 3 hours later. All of the rats underwent laparotomy and thoracotomy under anesthesia in the 6th hour and tissue samples were obtained from the liver, the pancreas, and the lungs. The tissue samples were blindly examined by a pathologist according to the histopathologic scores specifically described for each tissue. Histopathologic examinations revealed that lebacyd caused obvious microscopic changes. The liver: disseminated minimal cellular damage; the lungs: alveolar congestion and hemorrhage, neutrophile aggregation or infiltration in vascular walls and air areas; the pancreas: edema and diffused enlargement in interlobular and interlobar septa. These changes were statistically significant in the group 2 compared to group 1 ($p<0.05$). IL-10 administration in group 3 reduced these changes significantly ($p<0.05$). The results of the experiment suggest that IL-10 reduces histopathological changes significantly in experimentally induced OPI in rats.

DOES INTERLEUKIN-10 ADMINISTRATION AFFECT SERUM CHOLINESTERASE LEVELS AND FATIQUE IN EXPERIMENTAL ORGANOPHOSPHATE INTOXICATION IN RATS?

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Organophosphate intoxication (OPI) is a commonly encountered problem in emergency departments, which may cause serious or fatal outcomes. Treatment modalities in use are supportive care and antidote administration. The aim of this study is to investigate how interleukin-10 (IL-10) administration, an agent with cytoprotective effects, would affect serum cholinesterase levels and fatigue - a clinical course indicator - in rats undergoing experimentally induced organophosphate intoxication. Thirteen rats were divided into 3 groups, each consisting of 10 rats – sham, study, and treatment groups. Lebacyd was the agent used to induce OPI. The rats in group 1 did not receive any agent during the experiment. In the group 2, 6 mL/kg of lebacyd was given intraperitoneally (i.p.) 30 minutes and 3 hours later. In the group 3, 6 mL/kg of lebacyd was given i.p., followed by 2 mcg/kg IL-10 i.p. 30 minutes and 3 hours later. Fatigue levels of the rats were noted during the experiment and blood samples taken with cardiac puncture in the 6th hour of the experiment. Fatigue started in the 15th minute and diminished significantly in the group 3 (treatment group) after the 180th minute. Serum cholinesterase level fell by 75 % in group 2 (study group) and by 45 % in group 3 (treatment group). Increase in fatigue was positively correlated with decrease in serum cholinesterase level. IL-10 administration decreased fatigue and increased serum cholinesterase level significantly. The results of the experiment suggest that IL-10 may be a potential agent in management of organophosphate poisoning and that further experimental studies using IL-10 are needed.

EFFECTS OF ORAL L-ARGININ ADMINISTRATION ON SODIUM HYDROXIDE-INDUCED CORROSIVE ESOPHAGEAL BURNS IN RATS

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The aim of this study is to investigate if L-arginine would show a healing effect on corrosive burn of the esophagus induced with 10 % sodium hydroxide in rats. A total of 60 rats were divided into 6 groups, each containing 10 rats. The experiment lasted for 48 hours in the first 3 groups and 28 days in the second 3 groups. No corrosive burn was induced in groups 1 and 4. Esophageal corrosive burn was induced with 10 % NaOH in group 2 and 5 but no treatment was applied. Esophageal corosive burn was induced with 10 % NaOH in groups 3 and 6 and 250 mg/kg of L-arginine was administered orally in single dose each day. The first dose was given 30 minutes after the induction of burn. Group 3 received the treatment twice. The treatment lasted for 1 week in group 4. A 1.5-cm piece of distal esophagus was excised at the 48th hour in the first 3 groups and examined histopathologically. Histopathologic examination was performed according to presence of the following changes: edema, inflammation, increase in submucosal collagen, damage to muscularis mucosa, and collagen deposition in the tunica muscularis, each finding being assigned with a score. Each of the first 3 groups was compared with one another. The same comparisons were made among the second 3 groups. Microscopic examination of the samples from the group given L-arginine revealed that edema was significantly resolved at the end of the 2nd day ($p<0.05$). The 28th day microscopic examination of the samples from the group treated with L-arginine showed a statistically significant decrease in submucosal collagen increase ($p<0.05$). In conclusion, the findings of this experiment suggest that orally administered L-arginine may contribute to healing of corrosive esophageal burn injuries probably through its effects on maintenance of gastrointestinal mucosal integrity and enhancement of microcirculation.

A CASE REPORT OF MASS EXPOSURE TO 2,4-DINITROPHENOL (DNP)

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During a 3-day period, 33 adults and children developed signs of acute 2,4-dinitrophenol (DNP) poisoning after ingesting contaminated fish in Tonciu, Romania. DNP is used in pesticides, herbicides and in the manufacture of dyes and wood preservatives. Exposure commonly occurs from water contaminated by pesticide runoff and from air contaminated by manufacturing plants. Toxicity results from uncoupling of oxidative phosphorylation in mitochondrial cells, resulting in symptoms of nausea, vomiting, dizziness, sweating, headache and increased metabolic rate. In this instance, barrels containing dinitrophenol derivatives contaminated a nearby stream, and the fish that were killed as a result were ingested by local villagers. Methods: This is a case report with literature review. Results: 33 patients presented to the Mures County Emergency Department in Tirgu Mures, Romania over a three-day period. Patient ages ranged from three years old to 66 years old, with the majority of patients being males (21/33) less than 20 years old (17/33). All had consumed fish that later investigation showed had died from DNP exposure. Patients presented at varying times after ingestion, ranging from less than 12 hours (7/33), 12-24 hours (6/33), 24-48 hours (13/33), and more than 48 hours (3/33), with 4 patients whose time of presentation was unknown. The patients had multiple complaints including nausea (18/33), vomiting (13/33) abdominal pain (15/33), headache (7/33), dizziness (7/33) fatigue (1/33) and throat pain (1/33); three patients were asymptomatic (3/33). All patients were either observed in the emergency department for 24 hours or admitted to the Medicine or Pediatric service for at least 24 hours. Conclusions: Recognition of clinical signs in DNP poisoning is important as DNP compounds are widely used and death can result from exposure. Prompt recognition and treatment can improve outcome in exposed patients, including the pediatric population, for whom protection from contamination is essential. Physician awareness of potentially toxic industrial agents can reduce morbidity and mortality from exposures and is essential when isolated or milder cases may be more difficult to recognize.

MASSIVE HYDROXYCHLOROQUINE OVERDOSE. A CASE REPORT WITH SURVIVAL

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Hydroxychloroquine was first synthesized in 1946 by the addition of hydroxy group to the parent compound, chloroquine, in an effort to reduce toxicity. Chloroquine was 2 to 3 times more toxic than hydroxychloroquine in experimental animal studies. There have been a few reports on the toxicity of hydroxychloroquine in humans after overdose and the toxicokinetics are not well described. Our literature search revealed 16 reported cases of hydroxycholoroquine overdose. We report a case of the near fatal hydroxychloroquine overdose who survived without any sequelae. Case Report: A 17 year old female with a history of a suicide attempt involving ingestion 22 gr of hydroxychloroquine, marketed under the name Quensyl®, presented to the Emergency Department (ED). She denied taking any other drugs or alcohol. She used hydroxychloroquine 200 mg/day, hydrocortisone and aspirin for rheumatoid arthritis treatment for the past 6 months. Her vital signs revealed hypotension with blood pressure: 54/23 mmHg, normocardia with heart rate: 65 beats/min, and no respiratory distress. She was afebrile and pulse oximetry on room air was 99%. She was oriented and cooperated. Her Glasgow Coma Score was 14. On the physical examination there was no other abnormality. The initial electrocardiogram (ECG) demonstrated sinus rhythm with normal QT interval (400 msec). After 2000 mL normal saline bolus and 10 µg/kg/min dopamine, blood pressure became into normal limits and level of consciousness improved. Than a nasogastric tube was placed and gastric lavage performed and activated charcoal was given. At the 2 hours postingestion, ECG revealed prolonged QT interval (600 msec). Initial serum electrolytes, liver function tests, blood urea nitrogen, creatinine, complete blood count and arterial blood gases were within normal limits except mild hypokalemia (K: 3.1 mEq/dL). At the five hours postingestion, she had bigeminal ventricular ectopic beats, non-sustained ventricular tachycardia (VT) runs four times without hemodynamic instability and a torsade de pointes (TdP) that spontaneously resolved within seconds. She was treated with 100 mg of lidocaine, 2 g of magnesium sulfate, 120 mEq of sodium bicarbonate and 20 mEq of KCl intravenously. Six hours after ingestion she had monomorphic pulseless VT which was converted with defibrillation with 200 joules. After defibrillation she had improved level of consicousness. She had nonsustained VT without hemodynamic instability at ten hours postingestion. She was admitted to Intensive Care Unit (ICU). The day after of ingestion, her QT interval became normal (36 msec) but there were still ventricular ectopic beats. 60 mEq/day KCl was administered and the serum K level was kept above 4.5 mEq/dL. She had no other serious cardiovascular event and no other system adverse effect during her ICU course. She was discharged after few days without any sequelae. Discussion: Hydroxychloroquine is increasingly used in the treatment of many autoimmune and rheumatological disorders. Hydroxychloroquine poisoning is similar to chloroquine overdose. Hydroxychloroquine poisoning often is characterized by rapid deterioration and cardiovascular collapse because of myocardial depression and ventricular arrhythmias. Central nervous system and respiratory depression, convulsions, coma, nausea, vomiting, mild to severe hypokalemia, hypotension, widening QRS and QT intervals and ventricular arryhthmias may be seen in hydroxychloroquine overdose. Unlike chloroquine overdose, because of limited data there is no established lethal or toxic dose and the mortality rate of hydroxychloroquine is unknown. There have only been a few reported cases of fatal hydroxychloroquine overdose. A comprehensive review of the literature was conducted using Medline for the years 1966 through 2002. The search revealed 16 acute hydroxychloroquine poisoning cases, with 5 fatalities. The fatal cases included two 16 year old males who ingested 11 g and 12 g respectively, and a 2 year old child with 12 g, a 29 year old female with 14 g, and a 42 year old adult with an unknown amount. It seems that the cardiotoxic effects of hydroxychloroquine are the cause of death. Cardiotoxicity presented as a hypotension, conduction defects and ventricular arrhythmias. With the exception of one case, all 10 other cases who ingested in exceess of 4 g of hydroxychloroquine developed hypotension or fatal ventricular arrhythmias. It therefore appears that any ingestion exceeding 4 g of hydroxychloroquine would be considered a severe intoxication. Conclusion: Although it was synthesized to be less toxic than chloroquine, based on the few reviewed reported cases, the mortality from hydroxychloroquine overdose may be as high as than from chloroquine. Currently, although rarely seen and reported, emergency physicians and anaesthetists may more frequently encounter hydroxychloroquine overdose in the future due to increasing prescribing of this drug for many autoimmune and rheumatological diseases. The ingestion of more than 4 g of hydroxychloroquine should be regarded as a severe intoxication. We recommend that gastric decontamination, long term close cardiac monitoring, and treatment of arrhythmias and hypotension are the cornerstones of hydroxychloroquine overdose management.

ANTIDOTES STOCKPILES IN CHEMICAL PLANTS: A UNIQUE MODEL FOR ANTIDOTE AVAILABILITY

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Acute occupational poisonings usually involve several victims, with subsequent need of large amount of antidotes; however, many hospitals have an insufficient antidote stocks. Objective. To create a model to ensure prompt antidote availability for toxicologic emergencies in industrial setting, through the constitution of antidotes stockpiles in chemical plants.

Methods. Thirty-six petrochemical plants were included in the study. Working processes were analyzed in order to identify chemicals involved and risks of acute poisoning. Accidental non-occupational poisoning occurring at the workplace was also considered. Potential antidote use was assessed, according to factory size and workers number. Operating procedures to ensure the proper use of antidotes were prepared. Results. Each plant was given non-specific antidotes (ipecac, activated charcoal, simethicone, liquid paraffin) and antidotes for pre-hospital management of fire victims (amyl nitrite, oxygen, hydroxocobalamin). Other antidotes (folic acid, ethanol, methylene blue, calcium chloride, calcium gluconate, calcium disodium edetate, calcium gel, N-acetylcysteine, polyethylene glycol, penicillamine, sodium thiosulfate) were supplied according to specific risks in single plants. Antidote stocking and replacement was considered a Poison Center (PC) responsibility. In order to avoid antidote misuse, antidotes have to be used under the advice of the PC physician. Special attention was addressed to make sure the antidote is brought to the Emergency Department with the patient. In the first two years of activity, we had recourse to industrial antidotes stockpiles 10 times. Discussion. Insuffi-

cient antidotes hospital stocking is a worldwide problem. This unique procedure for the management of antidotes stockpiles in industrial plants under the PC responsibility, together with clinical advice from PC physicians, should allow a timely and proper management of cases of acute occupational poisoning.

UNEXPLAINED HEMOLYSIS IN YOUNG SUBJECTS: LOOK FOR POPPER USE AND A GLUCOSE-6-PHOSPHATE DEHYDROGENASE (G6PD) DEFICIENCY

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Poppers is the popular name for various alkyl nitrites widely used as quick-acting drugs for recreational purposes and to improve sexual performance. They are sold in small ampoules and consumed by inhaling the vapors. Poppers toxic effects, overlooked by most users, may be severe and represent a cause of Emergency Department (ED) referral. Case report. A 17-year-old man went to the ED because a blood test ordered by the general practitioner, for severe weakness began a few days before, revealed a state of hemolytic anemia (RBC $3.12x10^6$/mL, Hb 9.2 g/dL, Ht 30.4%, total bilirubin 3.95 mg/dL, indirect bilirubin 3.15 mg/dL). Clinical examination showed pallor and scleral jaundice. Past medical history was uncontributory. The patient mentioned popper use 5 days before. Blood tests in the ED confirmed hemolysis (RBC $2.62x10^6$/mL; Hb 7.8 g/dL; Ht 25.3%; bilirubin 1.43 mg/dL; LDH 567 UI/L; aptoglobin 21.04 mg/dL) with metHb 0.3%. Two days later, Hb was 8 g/dL and bilirubin 0.87 mg/dL; slight rise in LDH and reduction in aptoglobin values still persisted. History of popper inhalation together with hemolysis suggested to investigate for G6PD deficiency. Erythrocitary G6PD activity resulted 18 mU/10^9RBC (n.v.: 130-210). No reduction of erythrocitary pyruvate kinase and RBC osmotic resistance was found. Definitive diagnosis of hemolysis caused by amyl nitrite inhalation in a patient with previously undiagnosed favism was made. Discussion. Toxic effects are generally mild cyanosis (due to methemoglobinemia), headache, nausea and tachycardia. However, in patients with favism nitrites oxidizing action may produce severe hemolysis, even after the use of one single ampoule. When cyanosis is transient and mild, signs and symptoms of anemia may represent the only cause of presentation to the ED some days after popper inhalation. Both popper use and G6PD deficiency should be considered in young subjects with unexplained hemolytic anemia.

LONG QT SYNDROME INDUCED BY OXATOMIDE OVERDOSE IN CHILDREN

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Overdose of 2nd generation antihistamines, such as terfenadine and astemizole, has often been associated with ECG abnormalities such as prolongation of the QT interval. In this respect, no data are available on Oxatomide (Ox), an agent which is largely used in Italy at the recommended dosage of 0.5 mg/kg bis in die. Accidental ingestion of Ox is not rare in children. From July 1998 to November 2002, we examined 12 patients (mean age: 42.4 months, range: 21 days-14 years) admitted to hospital for Ox overdose. Ten subjects had taken the drug in a single dose ranging from 1.6 to 30 mg/kg; two other patients had been repeatedly treated with Ox at doses higher than those recommended in children. Serum Ox levels measured in 8/12 patients by HPLC were 105-1300 ng/ml (normal values: 20-40 ng/ml). The plasma levels were retested till normalization in 6/8 patients. ECG was recorded on admission and before discharge with repeated recordings in the patients showing altered ECG. A total of 5/12 (41.6%) children developed QTc prolongation (447-639 msec). In this group, 2 patients had ingested a single high dose of Ox and 1 patient had repeated overdosage. In one patient showing very high serum concentrations (400 ng Ox/ml) despite moderate drug overdosage (3 mg/kg), Ox had been coadministered with erythromycin. The maximum QT prolongation was found in a 3-week old patient following ingestion of 6.9 mg/kg Ox. Four patients in the group with drug-induced ECG abnormalities showed normal QTc at discharge. These observations indicate that oxatomide poisoning can prolong QT interval in children.

STINGRAY ENVENOMATIONS: A RETROSPECTIVE OF 120 CASES TREATED IN SOUTHERN CALIFORNIA

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Objective: Though found only in tropical and subtropical waters, stingray envenomations account for more human envenomations than any other marine vertebrate. Although there is a widely accepted standard of care for treating these injuries (irrigation, hot water soaks, debridement and antimicrobials) the effectiveness of these therapies has not been studied. Methods: A retrospective chart review of cases of stingray injuries presenting to our ED from January 1, 1994 to October 31, 2002 was performed. Each chart was surveyed for information concerning the victim's history and physical exam, emergency department intervention and treatment, and outcome. Patients were divided into group 1 (those presenting < 24 hours) and group 2 (> 24 hours). We analyzed the effectiveness of hot water analgesia acutely, use of antimicrobials, and the utility of radiographic imaging. Results: One hundred twenty cases of stingray envenomations were seen and treated in our ED during this period. There were 101 cases in group 1. 98 of these received hot water as a first line analgesic. 89 of the 98 (90.8%) patients had a documented improvement of symptoms. 71 (70.3%) group 1 patients received prophylactic antimicrobials. Only one of these patients returned for persistent symptoms and subsequently did well after changing antibiotics. Of the 30 (29.7%) that did not receive antibiotics, five returned to the emergency department with signs and symptoms of wound infection ($p<0.03$). All 19 patients in Group 2 received antimicrobials. 59 (58.4%) group 1 patients had x-rays taken to evaluate for foreign bodies. Only one of these had a significant finding, which was sand in the wound. Of Group 2, 9 (47.4%) received x-ray imaging, one film did show a foreign body however no mention was made whether this was a barb. Conclusions: Hot water and antimicrobials seem to be beneficial in the treatment of stingray stings. Radiographic imaging does not appear helpful in most cases.

INSECTICIDE POISONING CASES PRESENTING TO AN EMERGENCY DEPARTMENT IN INDIA

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One hundred and sixty patients of insecticide poisoning presented to Emergency Department of St. John's Medical College Hospital, Bangalore, India during the period 1998-99 were studied retrospectively. Organophosphate was the most common insecticide poison used (59.37%) followed by Organocarbamates (33.12%), synthetic Pyrethroids (5%) and Organochlorides (2.5%) in that order. The commonest age group affected was 21-30 years followed by 13-20 years. S. Pseudocholinesterase level was lower in organophosphate poisoning as compared to Organocarbamate poisoning Introduction: Insecticide poisoning is common in India as insecticides are widely used by the farming community and are easily available. Among insecticides, organophosphates, organocarbamates, organochlorides and synthetic pyrethroids are commonly used poisons. This study was undertaken a) to study the pattern of insecticide poisoning and its impact on the management in the emergency room and subsequently in the intensive care unit (ICU) and b) to formulate an admission policy for insecticide poisoning cases in emergency department. Materials and Methods: One hundred and sixty patients of insecticide poisoning presented to Emergency Department of St.John's Medical College Hospital, Bangalore, India during the period 1998-99 were studied. St.John's Medical College Hospital is a tertiary care teaching institution with a fully equipped department of emergency medicine having 6 bedded Intensive Care Unit (ICU). All these patients were treated in the emergency room and subsequently admitted to the ICU of the Emergency Department. Clinical data of all patients was collected as per the predetermined questionnaire during their stay in the hospital. Results: a) Study method: This was a prospective study involving 160 patients of insecticide poisoning presented to the emergency department. b) Age and sex: The mean age of the patients was 27.8 years (range 13-82 years); 101 were males and 59 were females. The commonest age group affected was 21-30 years followed by 13-20 years (Figure 1). c) Type of insecticide used: Organophosphate was the most common insecticide poison used (95 patients, 59.37%) followed by Organocarbamates (53 patients, 33.12%), synthetic Pyrethroids (8 patients, 5%) and Organochlorides (4 patients, 2.5%) in that order (Figure 2). d) Serum Pseudocholinesterase levels: Normal values for S. Pseudocholinesterase levels in this hospital's laboratory was 2710 to 11510 u/l. S. Pseudocholinesterase level was lower in organophosphate poisoning as compared to Organocarbamate poisoning (Figure 3). S. Pseudocholinesterase level was less than 1000 u/l in 43 (45.6%) patients in organophosphate group and in 2 (3.77%) patients in Organocarbamate group. e) Respiratory Failure (RF): Four patients developed mild to moderate weakness of respiratory and neck muscles (Intermediate syndrome) but did not require assisted ventilation. Fifty-two patients (54.7%) of Organophosphate poisoning developed respiratory failure requiring assisted ventilation; 33 (63.5%) of them developed RF within 24 hours of poisoning (Acute RF) and 19 (36.5%) developed RF between 24-90 hours of poisoning (Sub acute RF or Intermediate syndrome) and none developed RF after 90 hours. 28 patients (53.84%) had S. Pseudocholinesterase level less than 1000 u/l and 35 (67.3%) required ventilation for less than 7 days. RF was not noticed in other types of insecticide poisoning. f) Duration of Ventilation: Out of 52 patients who developed respiratory failure, 34(64.5%) required assisted ventilation for less than 7 days. The mean duration of ventilation was 5.2 days (range 3-32 days). g) Intensive Care Unit (ICU) stay: Duration of stay in ICU was less than 7 days in 80% of patients in Organophosphate group and in all of them in other groups. h) Organochloride and Pyrethroid poisoning: Common clinical features noted were altered sensorium (4 patients) and seizures (4 patients). None of them developed respiratory failure or required ICU care for more than 7 days. All of them responded to supportive care and improved. S. Pseudocholinesterase level was within normal limits all patients. i) Complications: Complications observed were nosocomial pneumonia in 26.25% of patients, Adult Respiratory Distress Syndrome (ARDS) in 4.37%, seizures in 3.75%, acute renal failure in 3.2% and upper gastrointestinal bleeding in 0.62 %. Nosocomial pneumonia and ARDS were observed only in ventilated patients. Seizure was observed in Pyrethroid poisoning (3), Organophosphate poisoning (1) and Organochloride poisoning (1). j) Outcome: Out of 95 patients of Organophosphate poisoning, 8 died, 10 were taken home against medical advice and remaining 77 recovered completely. All 8 patients who died eventually had developed respiratory failure during the course of their illness, 5 had acute RF and 3 had sub acute RF. Five of the deaths occurred within 24 hours of poisoning and remaining 3 developed complications such as nosocomial pneumonia and adult respiratory distress syndrome (ARDS) and died between 7-14 days of admission. Conclusion : 1. Organophosphate is the commonly used insecticide for poisoning. 2. Young adults in the age group of 13 – 30 years were commonly affected. 3. Respiratory failure is a common feature in Organophosphate poisoning especially in the first 24 hours of poisoning but some patients develop respiratory failure up to fourth day of poisoning. It is not seen with other type of insecticide poisoning. 4. Mortality in insecticide poisoning is influenced by many factors. Prominent among them are a) consumption of Organophosphate compounds, b) development of either acute or sub acute respiratory failure requiring assisted ventilation and c) development of complications such as nosocomial pneumonia, ARDS etc. 5. Acute poisoning with Organophosphate compounds requires admission to an ICU whereas other insecticide poisonings can be managed in the monitored beds outside the ICU (step down ICU / intermediate care wards).

POISONOUS SNAKES IN PUERTO RICO… TRUTH OR MYTH

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Background: Puerto Rico is home to four indigenous snake species, all believed to be non-venomous. A retrospective study revealed that the snake Alsophis Portoricensis possesses venom. It has no well-developed venom glands but the saliva contains enzymes characteristic of venom. Methods: We reviewed the Puerto Rico Poison Control Center log book from 1998-2000 to identify any snakebite reports that resulted in ecchymosis, swelling, coagulopathy or alteration of vital signs. Results: Four cases were identified. In three cases, the snake was captured and identified by genus and species. Initial presentation, history, physical exam, vital signs, treatment, disposition and follow-up were reviewed. Age range was 13-65 years old. All bites were inflicted on fingers and presented for evaluation from 2-24 hours after the event. All presented with localized pain, and ecchymosis. All had normal vital signs. Extension of localized edema ranged from hand to elbow. Pain and paresthesias were reported up to the shoulder in the pediatric patient who also presented

with vomiting. Conclusion: The saliva of the Alsophis Portoricensis snake contains enzymes of intermediate activity similar to enzymes found in crotalids. These enzymes caused localized pain, edema and ecchymoses but lacked the coagulopathies and systemic effects characteristic of crotalid snakebites.

DIGESTIVE CAUSTICS INTOXICATIONS. STUDY FROM DIFFERENT EMERGENCY SERVICES CENTERS

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Background: Ingestion of caustic products, either accidentally or intentionally, is one of the most frequently intoxication most frequently in our country. The presence of cleaning products at home makes both circumstances possible. Objective and Methods: We designed a prospective, multi-center study for six months to examine the epidemiologic, clinical and therapeutic profile of the oral contacts with these caustic products treated at emergency services in different Spanish cities. Results: A total of 10 hospitals provided information on 75 cases: 39 men and 36 women. In 7 cases the age was less than 15 years, and the oldest cases was 58 years. Alkaline products, basically lye (sodic hiphoclorithe) were ingested in 53 cases. In 7 cases the ingestion was an acid and the other 15 were caused by miscellaneous agents. There were 4 patient deaths, 3 of them due to chloridrique acid and the fourth due to parquat ingestion. Conclusion: The results of the study show the general low risk due to the caustic product of alkaline type, as are used in Spain at home and the high risk associated with the acid products used as cleaning products in the home.

GLUTEAL ABSCESS FORMATION AFTER INTRAMUSCULAR INJECTION OF ORAL AKINETON (BIPERIDEN) TABLETS IN A PSYCHOTIC PATIENT: A CASE REPORT

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Introduction: Surgical anaerobic infections account for 5% to 10% of all clinical infections. Most anaerobic infections are related to traumatic events. Causative agents are generally streptococcus and staphyloccus species. Chronic drug takers and illicit drug users are high risk groups in terms of soft tissue infection ensuing after local injection. Case report: A 52 year-old man with chronic psychosis presented to the emergency department with the complaints of swelling and pain in the hip. He reported that the swelling and pain increased gradually over the last two days. He had found about sixty tablets of Akineton (Biperiden) at home. He crushed and mixed the tablets with drinking water and injected himself intramuscularly on both gluteal regions. He presented to the emergency department with a temperature of 37.8ºC. Physical exam revealed, a 10x12 cm diameter swelling diameter with tenderness, hardness, aching, and induration. On the gluteal region tomography of the patient, abscess formations were observed in bilateral gluteal region, 5.5 cm on the left and 3.5 cm on the right. General surgery operated on the patient and 1.5 L of purulent material was drained. The patient was subsequently treated with daily dressings and antibiotic treatment, and was discharged on the 3rd day after operation, with planned daily clinical control. Conclusion: Drug abusers commonly present to emergency departments. For such patients, emergency physicians must obtain a careful history and perform a thorough physical examination. All skin areas should be searched carefully for puncture, wound and scars.

UNINTENTIONAL DRUG OVERDOSE IN A CHILD

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This is a case report of a 15 mo female brought into a community ED with a chief complaint of "stopped breathing." 25 minutes prior to arrival, the mother had given the child 4 cc of cough syrup prescribed by the doctor that day. Mom laid her child down for bed because the child became "very sleepy." The grandfather came over to check the child and found her not responsive and thought the child just "stopped breathing." He started CPR and the mother called 911. On EMS arrival, the child had a slow pulse and was barely breathing. EMS tried to intubate, but was unsuccessful and brought the child to the ED. On arrival to the ED, the child was slowly becoming more alert. Oxygen, IV and cardiac monitor was started. A finger stick glucose was obtained, but the child was empirically treated for acute change of mental status and given a bolus of D10 and narcan. The child awoke and cried. On lab studies, the child was found to be positive for opiates. On questioning of the mother, the cough syrup was a medication containing codeine - 1.66 mg per 5cc. Mom was instructed to give the child 4 cc using the syringe. On examination of the prescription, it appeared the decimal point was not put on the label and the mom had accidentally given the child an overdose. Medication errors are increasing. According to the Institute of Medicine, approximately 44,000 to 98,000 deaths occur each year due to a medical error. Of that, 7,000 deaths are because of a medication error. According to D. Bates, MD of Boston, published in JAMA, 49 % of serious medication errors occur at the prescribing stage, while 26% occur at the administrating point and 11% occurred during transcribing. This child was prescribed a narcotic inappropriately. Without following the routine for an acute change in mental status, giving oxygen, fluids, glucose and narcan, this child's condition may have not been treated appropriately since mom's usually cannot remember the name of the medicine they give their children. As EM physicians, we are trained to react in a way that keeps us suspicious.

HYPERBARIC OXYGEN THERAPY REFERRAL CRITERIA FOR CARBON MONOXIDE INTOXICATION: A SURVEY OF UNITED STATES POISON CONTROL CENTERS

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Objective: Controversy exists regarding the use of hyperbaric oxygen (HBO) for carbon monoxide (CO) poisoning. We surveyed poison control center (PCC) referral criteria for the use of HBO therapy in acute CO-intoxicated patients. Methods: An email-based survey was sent to all AAPCC-

identified PCC directors and medical directors in the United States. Results: 73% of PCC responded to the survey. 94% of the respondents indicated that they would recommend HBO for acute CO poisoning under specific clinical circumstances, including coma (98% of respondents recommended HBO therapy), seizures (91%), syncope (83%), myocardial ischemia (82%), shock (73%), altered mental status (70%), and persistent symptoms despite normobaric oxygen therapy (61%). 71% and 69% of PCC had specific carboxyhemoglobin levels in adults or pregnant females, respectively, above which HBO was recommended regardless of clinical symptoms. When two or more individuals from the same PCC responded to the survey, conflicting responses occurred 29% of the time. Conclusions: PCC are frequently consulted regarding management recommendations for patients with acute CO poisoning. PCC commonly utilize clinical symptoms in making referral decisions, with coma, seizures, and syncope viewed as being the most likely to require HBO therapy. 70% of PCC have a specific level, regardless of clinical symptoms, at which HBO is considered. The high frequency of conflicting responses within individual PCC highlights the controversy surrounding the use of HBO in acute CO poisoning.

DEVELOPMENT OF A NEAR PATIENT TEST FOR PARACETAMOL (ACETAMINOPHEN) AND SALICYLATE

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Background: Paracetamol (acetaminophen) is the most common drug taken in overdose in many countries; salicylate is also frequently taken. As a consequence, many patients who present with an overdose need to have serum tests to confirm or exclude the presence of paracetamol or salicylate; although many do not require any treatment. A near patient test (SureStepR) has been developed to rule in or rule out an overdose with each of these drugs. AIMS: To determine whether the near patient test performs adequately in the Emergency Department (ED) setting and improves efficiency in the management of overdose. The research questions were: a) how sensitive and specific is this test? b) what time savings can be made by using this test? Methods: A multicenter trial involving four EDs in England and Wales: St Mary's and Charing Cross Hospitals in London, Wexham Park Hospital in Slough and Prince Charles Hospital in Merthyr Tydfil, Wales. We included all patients with claimed or suspected paracetamol or salicylate overdose. A routine blood sample taken at 4-12 hours post ingestion was tested using the near patient test and was also sent to the laboratory for analysis. Times of presentation, blood sampling, results of the near patient and laboratory tests and outcome were recorded. Results: 101 patients were studied. There were no false negatives and the false positive rate was 4.45%. Patients presented on average 208.96 minutes after ingestion. The mean times from presentation to the result of the near patient test was 134.1(SD+93.3) minutes and for the laboratory test 250.6(SD + 95.1) minutes. The mean difference in time between the two tests was 116.5 minutes ($p<0.001$). Conclusions: This near patient test can be used to rule in or rule out an overdose of paracetamol or salicylate both effectively and rapidly. Further work is needed to determine if the test can be used at the time of presentation instead of waiting until four hours post ingestion.

BEHAVIOR OF BICYCLISTS IN AL-AIN CITY, UAE: AN OBSERVATIONAL STUDY

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Aim: To study the behavior of bicyclists in Al-Ain city so as to define the level of safety of cycling. Methods: 415 bicyclists were observed in the main roads of Al-Ain city over a period of 6 weeks. 57% (236) of these observations were at day light hours and 43% (179) were made during night. Results: 99.5% (413) of bicycle riders were males, 97% (403) were adults, and 98% (407) were non-local, mainly from the Indian continent. In 91% (377) there was only one rider while in 9% (38) there were two riders. 70% (289) were on the main road in contact with high speed vehicles while 30% (126) were on a side path or pavement. 54% (223) rode with the direction of traffic and 46% (192) against it. Only 0.5% (2) used helmets and only 1 % (2/179) used lights at night. Conclusions: Safety standards for bicycle riders in Al-Ain city are alarmingly low. These standards should be raised both by law and public education.

ESTABLISHMENT OF A TRAUMA REGISTRY AT AL-AIN CITY

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Background: Trauma is the second major cause of death in the United Arab Emirates which affects mainly the young population. This has profound health and economical burden. Implementing quality improvement policy is essential for progress in the health system. We aimed to design and implement a hospital trauma registry so as to monitor the care of injured patients. Methods and Results: 1. A suitable data entry form was designed which was modified after the Trauma Services form at Perth Hospital of Western Australia 2. Trauma patients who are admitted for more than 24 hours or who die in hospital will be included. 3. Suitable computer hardware and software and a room space have been supplied by Al-Ain Hospital. 4. Funding was raised to appoint a full time Trauma Fellow who will be trained in data collection, entry, analysis and reporting. 5. A general web-based database-driven model is being established by a Postdoctoral Information Technology expert. This will increase the possibility of combining data from different hospitals. Safety of patient privacy has to be protected. Conclusions: Establishing a Trauma Registry from scratch in a developing country is a challenging task. Nevertheless, it is feasible and has the potential to be developed to a nation wide database. Committed and enthusiastic personnel are needed to perform this task all over United Arab Emirates.

MECHANISM OF SPINAL HORSE-RELATED INJURIES

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Aim: To identify the mechanism of spinal injuries judging from the types of fracture sustained from horse-related injuries. Methods: 33 patients (23 F, 10 M), median age (range) 27 (15-69) years, were examined by radiography and CT. Results: 31 patients fell from a horse, one was kicked by a horse and one had a vehicle collision with a horse. Of the 33 patients, 32 had spinal fractures. Segmental locations were 8 cervical, 11 thoracic, and 13 lumbar. Ten patients had fractures in 2 adjacent cervical, thoracic or lumbar vertebral levels, and one patient in 3 thoracic vertebral levels, giving a total number of 44 fractured vertebrae (10 cervical, 17 thoracic and 17 lumbar). 24 patients had compression fractures by vertical load, with apparently 20 combined with hyperflexion, 1 lumbar with lateral bending, and 2 cervical with hyperextension and one cervical with rotation. Nine of the compression fractures (4 thoracic and 5 lumbar) were severe, of the burst type. Six patients had minor injuries, with fractures of the transverse or spinous processes only (1 cervical, 1 thoracic and 4 lumbar), indicating trauma from a direct blow. Of the cervical fractures, 3 were of the odontoid process of C2, 1 by hyperextension and 2 by hyperflexion combined with compression. Two patients had hyperextension cervical fractures, one was hangman's fracture, and the other tear drop fracture of C2. The type of injury correlated well with the mechanism of injury. The injury varied depending whether the patient fell on head, back, buttock or was directly hit by an object. Conclusions: This study highlights the importance of taking a detailed history describing the trauma incident which can anticipate the type of injury that occurs.

DOES BILATERAL LOCALIZATION AFFECT OUTCOMES OF PATIENTS WITH FLAIL CHEST?

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Background: The purpose of this study is to identify differentiations between patients with unilateral flail chest (UFC) and bilateral flail chest (BFC). Methods: The hospital records of 592 patients who were treated because of chest trauma between 1996 and 2000 were reviewed. Seventy-nine patients were identified to have flail chest, of those, 30 were excluded because of unilateral flail chest with bilateral rib fractures, anterior flail chest with sternum fracture and inadequate patient records. Forty-nine patients were included in the study and divided into two groups according to UFC or BFC. We compared the groups according to age, sex, injury type, Injury Severity Score (ISS), days of mechanical ventilation (MV), need for tracheotomy, thoracotomy, pulmonary morbidity and mortality. Results: Of the patients, 35 had unilateral flail chest (Group 1) and 14 had bilateral flail chest (Group 2). In group 1 patients, there were 30 males and 5 females, with an average age of 49.8±15.5 years (range 16 to 80). In group 2 there were 13 males and 1 female. The age of the patients with BFC ranged from 30 to 77 years (mean, 51.57±15.84). Between the groups, there were statistically significant differences with respect to ISS, day of MV, need for tracheotomy, and operative chest wall stabilization ($p<0.05$). Conclusion: There was no significant difference between the groups regarding pulmonary morbidity and mortality. On the other hand ISS, days of mechanical ventilation, need for tracheostomy and operative chest wall stabilization was significantly different between two groups. Early operative chest wall stabilization may reduce day of mechanical ventilation and need for tracheotomy.

EYE TRAUMA IN TURKEY

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Purpose: To investigate the demographics, causation and treatment of patients with ophthalmological emergencies presenting at a university hospital in Turkey. Methods: A prospective study was conducted at the eye department and emergency department of the Erciyes University Hospital of Kayseri in Turkey from January 2000 to 31 December 2002. All cases of eye trauma during this period were included. A formal questionnaire was completed with demographic data and details of the injury obtained. An ophthalmologic examination was performed on each patient and examination findings, diagnosis and treatment were recorded. Results: This study included 208 eye injuries. One hundred fifty-four injuries (74%) occured in males and 54 (24%) in females. The mean age was 27.3 years; 128 (62 %) patients were adults , and 80 (38 %) patients were categorized as pediatric. Thirty-three percent of all injuries occured at the work place, 22% in the street and 20% at home. Forty-eight percent of the injuries were caused by blunt trauma and 41% occured with sharp devices. Ninety-eight (47%) of all patients were hospitalized, in 82 the diagnosis was a ruptured globe. Remaining 110 patients had medical treatment and followed without hospitalization. Conclusion: Ocular traumas are a major cause of monocular blindness in Turkey and involve mostly young people. Prevention strategies based on education and information could reduce the incidence of ocular traumatic cases.

FLUID SUBSTITUTION FOR FIRE FIGHTERS USING BREATHING APPARATUSES – HOW MUCH MUST BE MADE AVAILABLE?

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Goal: Wearers of breathing apparatuses (SCBA) are subjected to physical stress when fighting fires. Heavy fluid losses can occur wearing SCBA in the heat. Fluid losses and substitution were examined in wearers of SCBA after fire fighting drills simulating real-life conditions. Methods: 50 Firemen with SCBA (Volunteer Fire Departments, age 24.9 years; height 180 cm; weight 82.4 kg; BMI 25.8 kg/m^2) were selected. All had valid certificates of health (G26/3). Participants had to complete a standardized scenario (average time of 21.0 min) in the Training Center of the State Fire Academy, Baden-Wuerttemberg, Germany. The protective gear/ SCBA

weighed an average of 25 kg. The body weight of the participants without clothing was measured before and after the exercise. Loss of body weight was equated with loss of fluids. After the exercise, the participants were offered mineral water without limitation. 60 minutes after the conclusion of the drill, the amount drunk per participant was determined by weighing the remaining water left in the bottles. Results: Participants lost a significant ($p<0.0001$) amount of body weight during the course of the exercises in comparison to their initial weights. The average amount of weight loss equaled 0.5 kg (0-1.8 kg), corresponding to a 0.62% change. Participants consumed mineral water in one hour after the drill in order to compensate for these losses; they drank an average of 764 ml (0-1410 ml). 28 participants (56%) substituted 700-1238 ml, 12 (24%) 290-542 ml, 9 (18%) 1400 ml, one (2%) drank nothing at all. Conclusion: An average weight loss of 0.5 kg can be expected after a 21.0-minute simulation in fire department training facilities. 80% of the fire fighters substituted 700-1400 ml of fluids after completing the drill. An amount of 1400 ml of mineral water should be made available per Fireman per 20-minute exercise. Longer work times and higher levels of stress in work situations can cause even higher volume losses.

CORNEAL ULCERS IN THE EMERGENCY DEPARTMENT

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Corneal ulceration is a potentially blinding emergency and commonly encountered in the emergency department (ED). Objective: To describe the epidemiological characteristics of patients diagnosed with corneal ulcer and to determine if drug or alcohol use is associated with corneal ulcers. Design: Retrospective, computer-assisted chart review. Setting: Urban, university-based emergency department. Methods: The records of all patients diagnosed in the ED with corneal ulcer in 1999 were identified and retrospectively reviewed. Data collected included age, gender, chief complaint, tobacco and alcohol use, use of illicit drugs, final diagnosis, treatment, and disposition. Categorical variables were analyzed using Fisher's Exact test. A p value 0.05 was considered statistically significant. Results: 37 participants were included in this study. 70% (26/37) were males and 30% (11/37) were female. The mean age overall was 41.9 years (range 17-88), with no significant age difference between men and women. Pain was the most common present complaint (57%), followed by decreased acuity (51%), photophobia (27%) and foreign body sensation (24%). All patients received an ophthalmology consult while in the ED or within 24 hours of the ED visit. Herpetic lesions were documented in 5 (14%) participants. 11 patients (30%) were admitted and 5 (45%) of the admitted patients required surgical intervention. Contact lens wearers accounted for 14% (5/37) of the study population. Contact lens use by itself was not a significant predictor of corneal ulcer ($p=1.000$), however female contact lens wearers were more likely to have a corneal ulcer than males lens wearers ($p=0.013$). Cocaine, methamphetamine, and tobacco use were not significant factors associated with corneal ulcers. However, alcohol use did approach significance ($p= 0.056$). The final ophthalmologist's diagnosis differed from the ED diagnosis in only 6 patients. Conclusion: Males had a higher incidence of corneal ulcers than females in this study. Female contact lens wearers are significantly more likely than their male counterparts to develop corneal ulcers. Tobacco, methamphetamine, cocaine, and alcohol were not significant factors contributing to corneal ulcers.

REDUCTION OF METACARPAL FRACTURES IN THE EMERGENCY DEPARTMENT

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Objective: Metacarpal fractures that present to the Emergency Department are usually splinted and referred to hand clinic without any type of intervention. It is hypothesized that those patients with their metacarpal fractures reduced in the ED will have a decreased likelihood for future interventions such as surgery or reduction at their follow-up hand clinic visits. Methods: This retrospective study was performed at a tertiary care hospital on all patients in the year 2001 with an ICD-9 diagnosis of metacarpal fractures. Admitted patients were excluded. Data was entered into an Excel spreadsheet and statistical analysis was performed. Results: There were 236 patients initially enrolled over the study period, with 14 patients excluded for admission and 4 patients for miscoding. Of the 218 patients, mean age was 27 years, 90% were males, 34.8% were shaft fractures. Orthopedics was consulted on 49 patients (22%). 21 ED reductions (9.6%) were performed, 6 by ED staff. 89 metacarpal fracture patients (40%) followed-up at clinic after ED visit. Of those patients with orthopedic consultations and followed-up, 38% had an intervention planned or performed at follow-up vs. 13.4% in patients without orthopedic consultation and followed-up ($P<.05$). Patients with orthopedic consultation followed up 17.4 days after ED encounter vs. 9.8 days if patient had no consultation. Of those patients with ED reductions and followed up, 11.1% required post-ED intervention vs. 19.7% in those patients who followed-up and did not have a reduction. Conclusion: Although follow-up was low among metacarpal fracture patients, patients with ED reductions had less intervention at hand clinic follow-up as compared to patients without reductions. More reductions performed in the ED may inherently improve patient long term outcome in regards to range of motion and function because of the high incidence of low follow-up.

SUBARACHNOID PLEURAL FISTULA (SPF): AN UNUSUAL CAUSE OF PRESENTATION OF RESPIRATORY FAILURE IN THE ED

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Introduction: SPF due to blunt/penetrating thoracic trauma, thoracic or spinal surgery is rare (30 cases described in the literature up to 2002) and its presentation with respiratory failure in the ED is absolutely uncommon. We report a case of a young girl who was admitted in the ED after sudden presentation of respiratory failure due to a large pleural effusion due to cerebrospinal fluid (CSF) leakage. Case report: A 25 yrs old woman was transferred to our ED for severe dyspnea seven days after a car accident where she sustained a complete paraplegia and sensory loss at T_{10} level. She recalled a history

of other two car accidents during last 18 months when she had a severe amyelic thoracic spine trauma with fracture of T_{10} subjected to T_9- T_{10} laminectomy with recovery to a normal life. Once in the ED she had a chest Xray showing a right pleural effusion with almost complete collapse of the lung and a thin left pleural effusion. Right thoracentesis was carried out and 800 ml of clear fluid was immediately evacuated. The chemical analysis of the fluid revealed a crystal-clear transudate, free of cells, normal glucose, chloride and protein content which confirmed the SPF with CSF collection in the pleural cavity. A chest tube was positioned in the 5th right intercostal space and a total of 2000 mls of CSF were evacuated with an rapid disappearance of respiratory symptoms. On day 2, a CT scan showed a controlateral left pleural effusion associated with passive collapse of the inferior lobe. 800 ml were evacuated in the following 24 hrs. Even if it is a common opinion that the fistula rarely heals without surgical intervention often leading to CNS infection or pneumocephalus, she was intubated and ventilated for the following 72 hrs with resolution of the lung atelectasia and effusions. At a 6 months follow up the patient did not refer any other symptom and the chest Xray was normal Comment: The majority of SPF are associated with severe spinal cord trauma, especially in case of a penetrating trauma. In such a case it was responsible of a sudden respiratory failure. The pressure gradient between the subdural and pleural space could maintain the CSF leakage. The surgical repair is often indicated but in such a case a "conservative" approach with positive pressure mechanical ventilation has been successful.

HAND TRAUMA IN AN EMERGENCY DEPARTMENT

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Objective: To describe the epidemiology of traumatic lesions of hand in adults admitted in an emergency department and taken in charge by a specialised surgeon (wrist excluded).

Methods: Retrospective analysis of all charts of patients admitted for hand trauma over one year. Patients transferred from others ED (491 charts) were excluded for analysis. Lesions were separated into three classes: pulp and nail, blunt trauma, and wounds. Results: Hand trauma represented 5.6% of all admitted patients (2393 patients for a total activity of 42500). All hand trauma were assessed by the specialised surgeon. Lesions are detailed in table 1. A total of 407 patients were hospitalised. A total of 1271 (54%) patients had internal lesions (bone, tendon, nerve or vessel), and in 5% (117), lesions were multiple. Table. Epidemiology of injuries in hand trauma (2567 lesions in 2393 patients).

Pulp and Nail	484		18.5%
Blunt trauma	804		31.5%
Bruise (alone)	42		1.5%
Fractures	448		17.5%
Carpometacarpal		208	
Phalangeal		240	
Joint injuries	318		12.5%
Carpometacarpal joint		52	
Metacarpophalangeal joint		148	
Interphalangeal joint		118	
Wounds	1281		50%
Skin alone	638		25%
Specific injuries	643		25%
Tendon injuries		352	
Neurovascular injuries		253	
Amputations		38	

Discussion: Hand trauma is frequent and account for approximately 5% of ED visits. Internal injuries of functional tissues (bones, joints, tendons, nerves, vessels) are present in 55% of the cases, suggesting that specialised care could be beneficial for the patient (diminution of sequel) and the society. Emergency physicians should be trained to identify injuries or situations of potential injury. In addition, these patients should rapidly be sent to a specialised surgeon for long term care and rehabilitation. Conclusion: In our country, more than one million of hand trauma are received in Emergency Departments a year. Emergency physicians should be aware of the epidemiology of internal lesions, and should be trained to take in charge those patients.

COMPUTED TOMOGRAPHY WITHOUT ORAL CONTRAST SOLUTION FOR DIAPHRAGMATIC INJURIES IN BLUNT ABDOMINAL TRAUMA

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Background: Computed tomography (CT) utilizing oral contrast material has traditionally been advocated for the detection of bowel and diaphragmatic injuries in blunt abdominal trauma (BAT). The necessity of oral contrast for these injuries has recently been called into question. Objective: To determine the sensitivity and specificity of CT without oral contrast for diaphragm injuries in BAT. Methods: We prospectively enrolled 500 consecutive "trauma-one" patients who received CT imaging and interpretation (CT-Read1) of the abdomen within 45 minutes of their arrival from July 2000 to December 2001. All patients were imaged without oral contrast, but with intravenous contrast. CT images were reviewed within 24 hours of admission by research radiologists (CT-Read2) blinded to CT-Read1. True injuries were determined hierarchically by: laparotomy, autopsy, discharge diagnoses, CT-Read2, and 3-month telephone follow-up. Results: There were 9 patients with laparotomy or autopsy proven blunt diaphragm injury. Six were in female patients, and 8 involved the left hemi-diaphragm. For those with diaphragm injury the average age was 47.4 years (compared to 34.8 years for those without) . The average presenting GCS was 10.7 and 11.9 for those with and without diaphragm injury, while the ISS for those with and without diaphragm injury was 34.4 and 18.5 respectively. CT-Read1 correctly detected only 6 of 9 blunt diaphragmatic injuries. CT-Read1 missed three diaphragm injuries. One of these involved the right hemi-diaphragm, while the other two were left sided. There were no false positive findings with CT-Read1 for blunt diaphragm injury. The sensitivity and specificity of CT imaging with respect to blunt bowel and mesenteric injuries was 66.7% and 100% respectively. Conclusion: The low incidence of blunt diaphragm injuries in this study limits it applicability, but CT without oral contrast appears to have an unsatisfactorily low sensitivity to be utilized reliably for this injury.

TUBE THORACOSTOMY: COMPARISON OF A METHOD UTILIZING A NEWLY DESIGNED FORCEPS VS. CONVENTIONAL TECHNIQUE IN A CADAVER MODEL

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Introduction: The standard method for chest tube throracostomy in the USA and the UK typically utilizes large arterial forceps (in the USA this forceps is known as a curved Mayo clamp). A new smaller forceps (the Andrews forceps) has been designed to minimize injury to the intercostal muscles and facilitate tube placement. This study was designed to compare the new "Andrews forceps" to the conventional method. Methods: 10 operators participated in the study - 4th year medical students (2), 2nd year Emergency Medicine (EM) residents (1), 3rd year EM residents (2) and 4th year EM residents (5). Operators placed chest tubes using both methods on fresh frozen thawed human cadavers. The order of method being performed first was randomized. The operators were timed for both methods from skin incision to the time when the operator themselves felt the chest tube was properly positioned. Successful tube placement was verified by the investigator using direct palpation of tube into the pleural space. Operators then plotted ease of dissection, ease of tube placement and overall comparison for the 2 techniques on a standardized form using a 100mm visual analog scale (VAS scale). For ease of dissection and tube placement a VAS score of 0mm indicated extreme difficulty and a score of 100mm indicated extreme ease of the procedure. For overall comparison a VAS score of 50 was defined as equivalent ease for the two techniques, with Andrews favored at 0mm and conventional method favored at 100mm. Results: The mean time to insertion was 60 seconds for the conventional method and 74 seconds for the Andrews forceps, but this difference was not statistically significant (p=0.173). Mean VAS scores for ease of insertion were 60.1 and 83.4 for the Andrews forceps and conventional method respectively, but the difference was not statistically significant (p= 0.107). Mean VAS scores for ease of dissection were 57.8 and 84.9 for the Andrews forceps and conventional method respectively, and this parameter was statistically significant (p= 0.042) in favor of the conventional method. The overall ease of use also favored the conventional method with a mean score of 68.6 (p= 0.035). Conclusions: The results indicate that overall the operators were more comfortable with the conventional method. This is not unexpected given prior experience (in all but the medical students) with the conventional method and no prior use of the new forceps. Further study will be necessary to truly evaluate the utility of this new surgical tool, and perhaps focus on operators with no prior experience. Limitations of the study include a small number of enrolled operators (n=10) with varied levels of training, inability to blind, cadavers do not exactly represent the clinical procedure, and the VAS scale is not clearly validated for use with procedure difficulty (as it has been validated with measurement of pain).

THE GALASKO REPORT IMPLEMENTED

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Introduction: The objectives were to demonstrate the resource implications for emergency medicine of inpatient management of mild/moderate head injuries and to determine the effectiveness of current CT guidelines. Methods: A retrospective study of head injuries presenting to St James's Hospital, Dublin were the Galasko report has been implemented since 2001.We studied injuries presenting from January 2001-January 2002. Length of stay, indication for admission and CT scan, mechanism of injury and follow up were identified. Results: 2281 patients presented with head injury as their first or second triage complaint. 123 patients were admitted to the emergency ward of which 34 had CT investigation. 10 CT scans demonstrated brain injury. Brain injury was associated with vomiting, GCS 14 (confusion), deterioration of GCS, clinical basilar skull fracture and alcohol related falls. The average length of stay for patients admitted to observation ward was 2.3 days and 5 days for those who had a brain injury on CT scan. Conclusions: Implementation of the Galasko report has resource, manpower and training implications for emergency medicine. The current CT guidelines should be modified to include GCS<15, neurological symptoms eg vomiting and alcohol related falls.

THE ANTERIOR-POSTERIOR CHEST X-RAY DURING TRAUMA SCREENING: WHAT ARE WE MISSING? TWO CASES FOR CHANGING EM PRACTICE

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Introduction: In trauma patients AP chest x-ray are obtained in supine position. This is common practice and is recommended by the American College of Surgeons ATLS program. However, interpretation of these supine AP chest films is difficult. Projections change due to gravity and typical signs of pneumothorax may be absent or missed. Objective: To find alternatives and change clinical practice in order to reduce delay in treatment in trauma patients with ventral pneumothorax. Design: We present two recent case reports with x-ray's and CT-imaging and we reviewed literature. Results: Chest x-ray sensitivity for pneumothorax, in a standing patient, has been reported to be as low as 20% and in supine patients this is even worse. Alternatives for this diagnostic dilemma in the trauma setting are: cross-table lateral chest x-ray which has higher sensitivity, but is not specific for the side of pneumothorax. Ultrasound of the thorax has been shown to require little time with extremely high sensitivity and specificity of 95% and 91% respectively. CT-scan of the thorax remains the gold standard but requires a "road trip". Discussion: In case of reasonable suspicion and a negative for pneumothorax chest x-ray, additional diagnostic procedures should involve echo of the chest or cross table lateral chest x-ray. In both our cases echo abdomen was performed which could have been extended to the thorax with little extra effort. A "negative for pneumothorax" radiograph may contribute to further delay in treatment. Conclusion: Pertinent to the diagnosis of a pneumothorax are the clinical presentation, high level of suspicion and the use of chest radiography. A ven-

trally located pneumothorax is easily missed and may progress to a tension pneumothorax at any time. In addition to supine AP-chest x-ray, we advocate that cross table lateral chest x-ray and echo thorax is introduced into common practice guidelines, especially when intubation is performed prior to transport, CT-scanning or operation.

PATTERNS OF PATIENT PRESENTATION TO A DUBLIN URBAN EMERGENCY DEPARTMENT WITH ASSAULT RELATED INJURIES

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After perceiving an increase in the number of patients attending a large urban Irish Emergency Department(ED) with injuries sustained in assaults, the authors sought to examine the issue. A prospective observational study was carried out to look at the demographic profiles of victim and perpetrator, at rates of crime reporting and at the level of follow-up care arranged in the ED. Those most commonly assaulted were young Irish males who usually sustained head or facial injuries during weekend nights. Glass was the weapon most often used. Less than two-thirds of all victims planned to report the incident to the Garda Siochana (the Irish national police force). Women assaulted by their partners were least likely to involve the police. One fifth of patients required admission. Violence in Dublin's inner city is now a major health issue.

PATIENTS WITH CUTANEOUS BURNS TREATED WITH BURNSHIELD. DEFINITIVE DATA

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Introdution: Some experimental research recently conducted on skin burns of varying degree and percentage defines a burn as a state of dehydration. As indirect confirm of this, repeated "cooling" of the burn with a water-imbued gauze or other means (hydrogel) reduces the surface temperature and the state of dehydration of the burn zone, with a diminution of pain and of damage due to perilesional vasodilatation. The results are presented of a study of burn patients involving the use of Burnshield for cutaneous burns of varying degree caused by a number of agents. Our original aim was to look for useful materials in order to counteract pain in burn patients. The study has now also to include the incidence of late complications (keloids and hypertrophic scars). Methods: Between July 2000 and January 2001, we treated 20 patients with Burnshield for cutaneous burns of varying degree (1^{st} – 3^{rd} degree) due to a variety of causal agents (physical and chemical). Our original aim was to find useful materials in the fight against pain in burn patients, and our results were good. Now, at some distance of time (mean follow-up, 15.2 months; range, 14-18 months), we report on the incidence of late complications (keloids and hypertrofic scars) in our study. Therapy with successive medication with Burnshield has been reported in experimental studies by Jandera and Arturson. 18 patients were included in the study. One patient was excluded because of intolerance to Burnshield after second medication. Another diabetic patient with second/third-degree burns in over 50 % TBSA, was sent to the nearest Burns Centre after receiving immediate treatment and after stabilized (hydration, analgesia, intubation, Burnshield, ecc.). The patient sent to the burns centre died after two months as a result of respiratory complications. All patients in the study received repeated medications with Burnshield every 12 h to 2 days, depending on the degree and extent of the burn. The lesions were first cooled and cleansed with fisiological solution at room temperature (23° C) and treated surgically within 24 h if necrosis was present. The burn was treated repeatly with the hydrogel, the entire area being sealed with an impermeable film until complete re-epithelialization. We performed either fibrinectomy or dabbing procedures with silver nitrate in the event of the appearance respectively of abundant fibrin or exuberant granulation tissue during the damage repair phase. Results: The mean age of the patients was 35.4 yr (range, 1-79 yr). Three patients were male and 15 were female. The mean percentage of burned skin was 3.7 % (range, 1–9 %). When re-epithelialization was complete, the patients were examined monthly, for the possible appearence of hypertrophic scars or keloids. The percentage of late post-burn complications (hypertrophic scars and keloids) reported in the literature is very high (70-80 %). If these complications occured, the patients received repeated therapy with Sameplast and/or silicone sheets (Siloskin). The same eight patients with complications after re-epithelialization were given Sameplast therapy (one patient also with Siloskin), with treatment beginning after re-epithelialization and continuing on average for 4.1 months (range, 1-14 months). Our study produced a percentage of hypertrophic scars and keloids in 44.4 % of the cases (8 patients out of 18) after re-epithelialization, after use of Burnshield only. The results of the follow-up show an overall late complication rate of 22.2 % (4 patients out of 18). Maceration in perilesional skin was the most frequent complication in these patients (55.5 % of cases); this required temporary suspension of treatment but did not prevent continuation of therapy with repeated medications of Burnshield. Antibiotic therapy was conducted in two patients only. Conclusion: It would be useful to perform a multi-centre study with an adequate number of cases equally involving burns centres, first-aid stations, and the 118 emergency service, with the aim of finding some answers to our research.

THE CHALLENGE OF STAB WOUND MANAGMENT

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Objectives: General principles about the management of penetrating injuries Literature review of the guidelines for treating penetrating wounds. Recommendations: 1. Do not be fooled by apparent small wounds which can be life threatening. 2. The association of more than one life threatening injury should be considered and managed simultaneously. Case presentation - 1st case: 20 years old male with 2cm stab wound in his Lt loin, hemodynamically stable, clinically no signs of internal organ injury including normal CXR. CT showed hemopneumothorax and renal injury, pt. was physically restrained because he walk out of ER with bizarre behavior. Urine toxicology was positive. Real life photos and CT are included. The challenge of managing apparently small wound. - 2nd case: young male with large stab wound 18cm in the abdomen which looked deep, reaching the muscle, but clinically stable without signs of internal organ injury. CT abdomen was normal, wound was closed in ER and patient discharged. Real life photos included. - 3rd case: Young male, with severe

dyspnea due to a small 2cm stab wound in the neck zone II, causing moderate pneumothorax and brachial plexus injury without other deep neck structures injury (case report). The association of hypovolemic shock and exacerbation of acute asthma in this patient (three life threatening causes of respiratory distress) present a challenging scenario of diagnosis and management . Real life photos and movie are included.

BILATERAL SHOULDER DISLOCATION DURING AN EPILEPTIC SEIZURE

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Introduction: The glenohumeral joint is the most commonly dislocated major joint. Convulsive seizures (epileptic or after electrical shock) are associated with unilateral or bilateral posterior dislocations. Although anterior dislocations are not typically seen after seizures this case demonstrates a patient with bilateral anterior shoulder dislocation. Case report: A 30 year old male was brought to Emergency Department (ED) by his relatives. His major complaint was bilateral shoulder pain and difficulty in moving his arms. He was found unconscious in his bed. His eyes and head were deviated to one side and jaw was locked. He couldn't move his arms and had shoulder pain as brought to the ED. He had a similar generalized tonic-clonic seizure 7 months ago. He didn't use the drug given for seizures. As he came to ED neurological examination was normal. Upper extremity examination was painful and range of motion was limited. His shoulders anteroposterior, axillary and trans scapular views were taken. On the x-rays bilateral anterior shoulder dislocation was seen. Using modified Hippocratic technique reduction was done. Then Valpeau dressing was applied to immobilize and orthopedic follow up was recommended and he was discharged. Discussion: Anterior dislocations can result from indirect or direct forces. Bilateral locked posterior fracture dislocation of the shoulders has been suggested to be patognomonic of seizures when diagnosed in the absence of trauma. Bilateral shoulder dislocation is an uncommon complication of seizure activity. The majority are posterior but anterior dislocation can be seen and occur during a seizure, electrical shock or electroconvulsive therapy. Conclusion: Patients coming to ED with a history of having seizure should be examined carefully for trauma and dislocations. Not to miss the diagnosis of a shoulder dislocation an axillary or modified axillary view must be added to the standard radiographic views.

PREVALENCE OF PROPER POSITIONING OF CAR HEAD-RESTRAINTS

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Objective: Car headrestraints decrease the incidence and severity of neck whiplash injuries when used properly. This study was designed to test the hypothesis that most headrestraints are improperly positioned. Method: 4,287 drviers were observed while driving their cars in Portland, Oregon over a one month period. Both proper vertical height (head restraint above eye level) and proper horizontal distance from occiput (defined as occiput touching head restraint) were noted. Results: A total of 4287 drivers were observed: 30 (1%) had no headrestraint; 158 (4%) had fixed headrestraints; 4099 (95%) had an adjustable headrestraint. 21% of the fixed headrestraints (33/158) were positioned optimally with no horizontal gap. Of the adjustable headrestraints, only 280/4099 (7%) were properly positioned in both planes; the rest (93%) were malpositioned. Conclusion: Most car drivers in Portland, Oregon, do not position their headrestraints to minimize neck injury from whiplash. Fixed headrestraints were three times more likely than adjustable headrestraints(21% vs 7%) to be properly positioned. Educational and other interventions may help to improve the rate of proper positioning of headrestraints in cars, thereby minimizing the prevalence and severity of whiplash injury from motor vehicle collisions.

EPIDEMIOLOGICAL CONSIDERATIONS FOR SEVERE HEAD INJURY IN TWO DIFFERENT SETTINGS: ITALY AND ARGENTINA

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Objectives: The aim of this study is to establish those differences between the Hospital General de Agudos (Buenos Aires – HGA) and the Ospedale Maggiore (Novara Italy, OMC) regarding these epidemiological and clinical factors: age, sex, trauma mechanisms, associated injuries, injury severity indicators, brain computerized tomography (CT) scan of the brain, incidence of anemia, hypoxia (defined as SpO2 < 92% or cianosis or apnea at the site) and hypotension and outcome measurements (GOS at 6 months).

Material and Method: Data source: analysis of prospective collected data from a database.

Setting: HGA: 400 bed general hospital, affiliated to the Buenos Aires University, covering an established population of 400.000 habitants that rise to 1200000 during working hours OMC: referral hospital for the Piemont region, covering 1000000 inhabitants.

Statistical Analysis: Student T test for mean differences and chi square test for non parametric variables. Results: Patients: 103 in HGA, 103 in OMC. Age: 33.7 + 16.2 (HGA) 40 +21.78 (OMC) p < 0-01. Sex: male 85.4% (HGA) 79.6 (OMC) p 0.27 female 14.5% (BA) 20.3% (OMC) p 0.27. Mechanism of accident: road traffic: 59.2% (HGA) 66.9% (OMC) p 0.01, pedestrian: 19.4% (HGA) 15.5% (OMC) p 0.46, sports: 1.9% (HGA & OMC), domestic: 5.8% (HGA) 9.7 (OMC) p 0.29, work 14.5% (HGA) 4.8% (OMC) p 0.01, suicide 1.9% (HGA) 0%(OMC) p 0.49. Initial GCS 6.6 (HGA) 5.9 (OMC) p 0.07, RTS 9.06 HGA) 8.44 (OMC) p 0.06, associated injuries: 60.1% (HGA) 59.2% (OMC) p 0.69. There was statistical differences for associated thoracic trauma (24 (HGA) 13 (OMC) p 0.03) and facial trauma (9 (HGA) 23 (OMC) < 0.01). According TCDB classification: Diffuse Lesion (DL)1: 3 (HGA) 16 (OMC) p <0.01, DL2: 2 (HGA) 39 (OMC) < 0.01, DL3: 34 (HGA) 9 (OMC) p < 0.01, DL4: 8 (HGA) 11 (OMC) p 0.47, Evacuated Mass: 51 (HGA) 26 (OMC) p < 0.01, Non EM: 4 (HGA) 2 (OMC) p 0.68. Hb: 10.2 (HGA) 12.7 (OMC) p < 0.01, Ht: 22.3% (HGA) 14.5% (OMC) p 0.38, Hy 5.8% (HGA) 14.5% (OMC) p 0.03. GOS: 1 (death): 33% (HGA) 27.1% (OMC) p 0.36, GOS 2-3: 9.7% (HGA) 20.3 (OMC) (p < 0.01), GOS 4-5: 57.2% (HGA) 43.6 (OMC) p 0.49. Conclusions: Both populations are comparable in terms of sex and severity; differences come from age (older population in Italy), trauma mechanism (major incidence of road traffic etiology in Italy and in work accidents in Argentina) and a greater incidence of anemia and hypotension in Argentina (related to the type of asso-

ciated injury) and hypoxia in Italy which could be related to the facial trauma associated injury. Nevertheless there were no differences in outcome, that could be explained for a same type of care in the emergency an intensive care units.

OSCILLATING SAW INJURIES DURING REMOVAL OF PLASTER

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Objective: To assess the incidence of injuries to patients who have had plaster cast removed by an oscillating circular saw at the Alexandra Hospital, Redditch and to recommend measures to avoid such injuries. Setting: A&E Department and plaster room. Methods: The records of each patient who had their plaster removed was kept in the plaster room and studied at a later date, especially of those who sustained any burns or lacerations during the removal of plaster. Results: 3875 plaster casts were in removed in one year; 28 patients (0.72%) sustained abrasions or burns over the skin. Conclusions: Removal of plaster cast by an inexperienced, ill trained user or blunt saw blade was the identified cause of injury. Strict protocols were required and introduced at the Alexandra Hospital to avoid litigation.

EFFECT OF ETHANOL AND ILLICIT DRUGS ON THE DIAGNOSTIC PERFORMANCE OF BASE DEFICIT AND LACTATE IN DIFFERENTIATING MINOR FROM MAJOR INJURY IN TRAUMA PATIENTS

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Objectives: Base deficit (BD) and lactate (LAC) are valuable triage tools for injured patients (pts). They reflect degree of oxygen debt and have been shown to predict outcome. Ethanol and illicit drug ingestion may further derange acid-base status. We evaluated the effect of Blood Alcohol Level (BAL) and drugs on admission BD and LAC in trauma pts. Methods: Prospective, observational study of trauma pts in a level one trauma center. Inclusion criteria: Penetrating and blunt trauma. Exclusion criteria: Isolated head injury. Predictor variables: BD and LAC. Outcome variables: Pts were stratified into Major (MJ) or Minor (MN) injury groups. MJ was defined by an Injury Severity Score > 15, blood transfusions, or a decrease in hematocrit >10%). Trauma groups were further subdivided into Intoxicated (+T) and Non-Intoxicated (-T), based upon the presence of a BAL > 80 mg/dl and/or positive urine toxicology (benzodiazepines, cannabinoids, cocaine, methadone, methaqualone, opiates, phencyclidine or propoxyphene). Statistical analysis: Data were reported as mean ± standard deviation. Interval data were analyzed by ANOVA with post-hoc testing by Bonferroni (á=0.05, 2 tails). Receiver Operating Curves (ROC) compared the diagnostic performance of BD to differentiate MJ from MN between +T and -T pts. Results: 409 patients (85% male) with a mean age of 32 ± 14 years were studied. n BD (mEq/L) LAC (mMol/L) MJ+T 49 -5.6 ± 5.5 4.5 ± 3.6 MN+T 204 -1.7 ± 3.3 2.6 ± 2.4 p <0.001 <0.001 MJ-T 27 -7.7 ± 7.6 6.7 ± 6.0 MN-T 129 -0.4 ± 2.9 2.3 ± 2.1 p <0.001 <0.001 BD and LAC were significantly higher in the MJ than MN in both the +T and -T groups. No significant (p=1.00) difference was noted between the areas under the ROC for BD in the +T (0.82) and -T (0.88) groups. Conclusions: The presence of ethanol and/or other toxins did not affect the ability of BD or LAC to identify MJ patients.

ERECT ARM. DON'T MISS IT

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Luxatio Erecta (inferior glenohumeral dislocation) is an uncommon type of shoulder dislocation. Although, most cases present in typical fashion, the diagnosis may be missed. Early recognition and reduction is important to prevent neurovascular sequelae from delay in diagnosis. We present this rare entity which was diagnosed at our emergency department in a patient who complained of painful and locked shoulder resulting from a fall. Case Report: A 46-year-old housewife presented to our emergency department with a complaint of painful and locked shoulder. About 5 hours before presentation, she slipped and fall on her outstretched arm. She suffered shoulder pain and suddenly she was unable to move her arm any direction. When she was admitted to the emergency department, her right arm was fully abducted with the elbow flexed and the hand was located just behind her head. The patient supported the right arm with her other hand. She was very uncomfortable and had severe pain with active and passive shoulder movement. Neurovascular examination revealed palpable radial and ulnar pulses, normal capillary refill and paraesthesias and hipoesthesia of the brachial nerve. IV meperidine was administered for pain. The anteroposterior shoulder plain film showed that the humeral head was located inferior to the glenoid fossa. There was no fracture of the glenoid, humeral head and the other bony structures. Closed reduction was done under conscious sedation and analgesia in the operation room setting. After succesful reduction, examination revealed that, however diminished, there were still paraesthesias, and normal pulses. Discussion: Luxatio erecta is a rarely seen type of shoulder dislocation. It is estimated that 0.5 % of all shoulder dislocations are of this type. Direct or indirect loading force to the shoulder can cause inferior glenohumeral dislocation. Most commonly the arm is in an abducted position when the extremity is forcefully hyperabducted, creating a leveraging of the proximal humeral head over the acromial process. The inferior portion of the glenohumeral capsule is then disrupted and inferior glenohumeral dislocation occurs. This indirect hyperaduction force is typically the result of a fall where the patient attempts to protect himself or herself by extending his or her arm in an outreach position. Less commonly direct axial loading forces on the fully abducted extremity can cause inferior glenohumeral dislocation. The clinical appearance of luxatio erecta is pathognomonic. The patients suffer pain and seem very uncomfortable. Typically the arm is hyperabducted, the elbow flexed, and the hand in overhead position. The patient, because of severe pain and locking, is unable to lower her/his arm. The other hand usually supports the affected arm to prevent movement and decrease the pain. On physicial examination, the humeral head is palpated inferior to the glenohumeral fossa on the lateral thoracic gage and the axillary cavity is filled by the humeral head. Although, diagnosis is not difficult with

appropriate history and clinical presentatition of patient. Plain films are necessary to confirmation of diagnosis and exlude possible fractures. The most helpfull radiographic views are the anteroposterior and axillary "Y" views. Radiologically, the shaft of the humerus is directed superiorly and lies parallel to the spine of scapula on the anteroposterior view. The humeral head is seen under the glenoid fossa without contact with the glenoid rim. The films also should be evaluated for potential fractures of the acromion, coracoid, clavicle, greater tuberosity, humeral head and the glenoid rim and acromioclavicular seperation. Luxatio erecta may be reduced in the emergency department. The key to success of this reduction is to apply adequate sedation and effective analgesia. The most effective reported reduction technique is the traction-countertraction technique. Upward traction on the extended arm is applied in line with the humerus shaft while an assistant applies countertraction in the opposite direction. Gently abduction will usually reduce the dislocation and the arm is then brought down into an adducted position. A post-reduction film should be obtained for conformation of reduction success and to exclude any iatrogenic fracture. The patient can than be discharged with shoulder immobilizer, analgesia, and orthopaedic referral. Associated musculoskeletal injuries are more common than neurovascular injuries. Rotator cuff tear and fractures accompany 80% of all luxatio erecta cases and surgical repair may be required. Sixty percent of the patients demonstrated neurologic injuries, most commonly to the axillary nerve. These injuries generally are neuropraxia which resolves after reduction. Significant vascular compromise such as a axillary artery occlusion, occured in 3.3 % of the cases. Open and bilateral luxatio erecta cases were reported. Some cases need long term rehabilitation. Conclusion: Although the clinical presentation is dramatic and diagnosis can be easily made, luxatio erecta can be initially misdiagnosed because of its rarity. Luxatio erecta should be suspected in those present to the emergency department with erect arm posture. Emergency physicians should be recognize and treat this appropriately, and also be alert for potential associated neurovascular and musculoskeletal injuries in luxatio erecta cases. Orthopaedic consultation and follow-up is recommended because of the high incidence of rotator cuff injury.

EPIDEMIOLOGY OF CHILDHOOD INJURIES IN AN URBAN AREA OF IRAN. A SURVEY OF 1774 CASES

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Thousands of young lives are lost every year as a result of accidents, and trauma remains the number one cause of childhood death. To better elucidate the incidence of various injuries, causes, rates of injury, and survival of urban childhood injuries, we undertook an epidemiological survey in Tehran, Capital City of Iran. Methods & Material: We prospectively studied 1774 traumatized children (0 to 16 years), who had admitted to six teaching hospitals of Tehran (2000-2001). Results: Rates of injury were higher for children over 7 years of age (72% vs. 28% $p<0.05$). The most common mechanisms of injury were falls (50.7%), and transport-related injuries (39%). Boys sustained higher injury rates than girls (74% vs. 26%, $p<0.05$) and most injuries occur during the 11-13 a.m. and 5-8 p.m. There was increased mortality for patients with an injury severity score> 20. The overall mortality for this study was 2 %. Discussion: The research into childhood trauma is still very young. In order to take effective preventative measures more factors must be determined.

TRAUMATIC GIANT PANCREAS PSEUDOCYST RUPTURE : REPORT OF A CASE

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A pancreatic pseudocyst is a collection of tissue, fluid, debris, pancreatic enzymes, and blood that can develop after acute pancreatitis. Pancreas pseudocyst rupture is one of the important complications of pancreas pseudocyst disease. Although many ruptured intraabdominal cyst have been reported, there is very rare of pancreatic pseudocyst rupture in the literature. Rupture of the pseudocyst can be a serious complication shock and hemorrhage may develop. In this case report we present a 22 years old male patient, who had been operated for acute abdominal syndrome and had pancreas pseudocyst rupture due to blunt abdominal trauma. Emergency laparatomy was performed. On abdominal exploration free intraabdominal fluid mixed with pancreas pseudocyst material and giant pseudocyst filling all abdominal cavity from pancreas to pelvic cavity were detected. Pseudocyst was ruptured through its anterior wall. In operation we didn't succeed to move all pseudocyst . We decided to palliative surgical therapy. Cystojejunostomy and cystoileostomy were performed. Postoperative period was uneventful and the patient was discharged tenth day postoperatively.The patient was followed up with three months intervals and he was free of disease on his second control visit. In conclusion, traumatic pancreatic pseudocyst rupture is very rare. Although it is a very rare entity, this kind of clinical presentation of pancreatic pseudocyst rupture should be kept in mind in emergency services.

YOUTH VIOLENCE RECIDIVISM AMONG ED PATIENTS

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Objective: The purpose of this study was to identify characteristics associated with violence recidivism in the youth population of an inner city Emergency Department(ED). Methods: This was a descriptive study, conducted at an inner-city level 1 trauma center. Trained research assistants identified patients age 10-24 during the period of January, 2001 to June, 2002 who presented to the ED as a result of a violent injury. Patients were screened and enrolled at the time of presentation to the ED using a structured data collection tool. Up to six attempts were made to contact all patients via telephone using a standardized questionnaire four to twelve months after their initial visit. Comparisons of means and Chi-square analyses of the demographic variables were performed. A logistic regression model was constructed to assess the characteristics associated with repeated violence. Results: Of 741 cases seen in the ED, 545 cases consented and were enrolled. 196 patients were successfully contacted for follow up. The mean age for the non-contacted group was 18.58 95%CI(18.28-18.88) and the contacted group 17.59 95%CI(17.06- 18.02). The age difference was significant with a $p=0.002$. There were no significant differences in gender,

ethnicity, or type of injury between the contacted group and the non-contacted group. Of the 196 contacted cases, 41 [20.92% 95%CI(15.11-26.73)] reported at least one repeat episode of violence. The mean age for the repeat group was 16.83 years 95%CI(15.67-17.99) with 68.29 % male. There were no significant differences in age, gender, or ethnicity between the repeat violence group and the non-repeat violence group. Conclusions: Youths who presented to the ED who had suffered a violent injury were a difficult group to follow and were at risk for repeat violence. There was no association between repeat violence and demographic characteristics. Further analyses of follow up systems and risk factors for repeat violence are needed.

THE MOST COMMON SCOOTER RELATED INJURIES IN A UNIVERSITY BASED EMERGENCY DEPARTMENT IN PUERTO RICO

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Objective: To identify the most common types of injuries related to the use of a scooter in Puerto Rico and compare them with literature from the Center for Disease Control and Prevention (CDC) and other international sources. Methods: A standardized, data collection template was used to gather patients' demographics, chief complaints, diagnoses and treatments from December 25 to April 1 2001. Statistical analysis was conducted and compared with available data from the CDC and the Queensland Injury surveillance unit. Results: The study yielded 62 patients in the range of 2-34 years old; 53% male, 47% women. The study revealed that 85.5% of patients were less than 15 years old, 34.5% under 8 years old. The ratio from male to women was 1:1. Fractures were the most common injury at 48%, lacerations 26%, closed head trauma 10% and abrasions 16%. In 82% of cases, no protective gear was used. Conclusion: The most common injuries acquired by scooters uses are: fractures, lacerations and abrasions. Protective wear should always be used in order to prevent these injuries. Lack of their use can explain why the number of injuries was higher as compared with surveyed literature.

THE LEVELS OF SERUM CARDIAC MARKERS AFTER MAXIMAL STRENGTH EXERCISE IN PHYSICAL TRAINING STUDENTS

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Background: Extreme exercise poses a variety of health hazards. Problems arise in distinguishing skeletal from cardiac muscle trauma on the basis of serum enzyme tests following severe muscle exercise. Objective: The goal of this study was to determine whether maximal strength exercise would increase in serum cardiac marker levels. Methods: Twenty-one male physical training students were subjects of the study. They were free of cardiovascular risk factors and without evidence of any heart disease according to case history and clinical investigation. Blood specimens of all participants were taken before and immediately after the 60-meter maximal strength exercise. The pre- and post-exercise serum levels of cardiac troponin-T (TnT) and myoglobin were measured by electrochemiluminescence immunoassay method. Serum total creatine kinase (CK), creatine kinase-MB isoenzyme (CK-MB), lactate dehydrogenase (LDH) and aspartate aminotransferase (AST) levels were measured by spectrophotometric methods. Statistical analyses were performed by the SPSS statistical software package. Statistical significance was assumed at a level of $p < 0.05$. Results: The pre-exercise and post-exercise TnT results were within normal limits. There were no significant differences with respect to pre-exercise and post-exercise serum myoglobin results (p=3D0.573). CK, CK-MB, AST and LDH were significantly elevated above pre-exercise levels in all runners ($p<0.001$). The maximal strength exercise does not result in the elevation of the plasma TnT and myoglobin levels in physical training students. The increase of serum CK, CK-MB, AST and LDH levels probably arise from the skeletal muscle trauma following severe muscle exercise.

EPISTAXIS AS AN EARLY SYMPTOM OF TRAUMATIC ANEURYSM OF INTERNAL CAROTID ARTERY. A CASE REPORT

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Background: Precavernous aneurysms affecting the internal carotid artery (ICA) are rare events (0.5-2 % of total cranial traums cases). They are a consequence of a complete or partial lesion of the arterial wall. (1,4,7) The presenting symptom of such occurrences is usually a hemorrhage located close to the injury; whereas epistaxis is a rare event but representing a highly predictable sign of post-traumatic aneurysm of ICA in its precavernous tract.(1,2,3,6,7,8) The ICA precavernous segment (C3,C4) is exceptionally affected by aneurysmatic lesion and more infrequently presents with epistaxis. In some cases the saccular pseudoaneurysm of the intracavernous portion may expand medially and downwards into the sphenoid sinus and present with progressively severe, often fatal epistaxis; in the uncommon lesion of the precavernous part (C3-C4) nose bleeding is less frequent. Epistaxis may be revealed within weeks, several months or even years after the trauma (5,7). Proven diagnosis for epistaxis is accomplished by angiography tests supported by other images exams. In a peripheral hospital such as ours, the gold standard for treatment of a patient presenting with such symptoms, is not to exclude any of the above consideration and urgently transfer the patient to a better equipped Care Center to have the appropriate angiography test and eventually proceed with immediate surgical removal of the aneurism. Case Report: April 2002, a 17 years old male patient, was admitted to our hospital with severe cranial trauma following a car accident. The patient was taken immediately to the Emergency care site and the CT scanning revealed multiple skull fractures (lateral wall of maxillary sinus and posterior and lateral walls of right orbit) and a right extradural hematoma. The patient was transferred to the specific neurosurgical unit to undergo a surgical removal of the hematoma with a successful result. He was discharged 15 days later after an uneventful postoperative course. 4 months later the patient presented again to our hospital due to a sudden episode of epistaxis, described as a very impetuous oc-

currence by his parent. The episode completely resolved by the time of his admission to our Emergency Care site. The patient was again hospitalized in our otolaryngology unit for observation and routine blood tests. The routine test and nose examination did not show any common cause of epistaxis, but a significant anemia (Hb 8) was noted. A contrast-enhanced cranial CT revealed a soft-tissue density near the right ICA with extension into the sphenoid and ethmoid sinuses. After the transfer to a higher level Care Center, digital angiography demonstrated a pseudoaneurysm of the precavernous portion of the right internal carotid artery (C3-C4 tract). Under general anesthesia, neuroradiologists placed metal spirals into the aneurysmal dilatation obtaining a 95% occlusion. Unfortunately this last treatment did not return the expected results and after sixty days the patient had a new massive epistaxis episode with consequent severe anemia (Hb7). For this reason and for those already known previous events, without hesitating, he was transferred again to the highly qualified Medical Care Center. He had to undergo another angiography exam followed by a new treatment with an inflatable balloon catheter. A Matas test for the adequacy of collateral circulation performed before the direct intravascular detachable balloon treatment indicated occlusion would be well tolerated. The aneurysmal portion of the ICA was definitively excluded from cranial and general circulation. Three months later the patient was completely asymptomatic. Discussion: Intracranial aneurism may occur after a blunt or penetrating head trauma, or as a consequence of surgical operation (7,9). The symptoms of such an occurrence is often of neurological or hemorrhagic nature and it may occur after weeks, months and more rarely years after the traumatic event took place (5,6,7). The most frequent symptoms are those deriving from the compression of the third, fourth and sixth pair of cranial nerves (2). Epistaxis is typical of intracavernous tract lesions of ICA and less frequent in rare postraumatic pseudoaneurysm of precavernous part. Massive epistaxis occurring after a severe head trauma should always indicate the presence of ICA pseudoaneurysm. CT scan and specially Digital Angiography represent the gold standard tests for the diagnosis. To tampon the nasal cavity with Foley catheter or other balloon catheter is a useful and simple method of controlling the hemorrhage (5,6). Operative procedures for ICA traumatic aneurysm include ligation of internal carotid artery, direct intracavernous ateriotomy, intravascular detachable balloon occlusion and aneurysm thrombosis with metal spirals (9). The anamnesis is of crucial importance, when a patient reaches the Emergency care site presenting atypical epistaxis symptoms, which do not find comparison with other similar cases. A proper treatment can only be undertaken after an accurate diagnosis. The epistaxis in a patient with proven cranial trauma, in the absence of other evident causes, should always indicate the development of an intracranial pseudoaneurysm. The immediate reaction to a proven diagnosis makes it possible to decide for the most proper treatment with exclusion of pseudoaneurysm and to guarantee for the patient life.

CONVULSIVE SEIZURE-INDUCED FRACTURE DISLOCATION OF THE SHOULDER. A CASE REPORT AND REVIEW OF THE LITERATURE

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A fracture dislocation of the shoulder caused solely by a convulsive seizure has been rarely reported in the emergency medicine literature. We describe a case report of a young man who sustained an anterior fracture dislocation of his shoulder after a nontraumatic, witnessed seizure. The present case demonstrates that forceful muscle contractions during convulsive seizures itself can cause a fracture dislocation of the shoulder without trauma. Emergency physicians should be alerted to this injury in patients presenting to the emergency department with a seizure, even in the absence of external trauma. Possible postictal consciousness disturbance may hinder early diagnosis. A complaint of shoulder pain after seizures raises a suspicion of fracture dislocation and should be evaluated radiologically.

OUR EXPERIENCE IN THE TREATMENT OF PENETRATING ARTERIAL INJURIES

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Background: The evaluation and management of patients with potential penetrating arterial injuries has been controversial, and has changed over time. Before the Korean conflict, these injuries led to significant disability, limb loss, or death. During World War II, peripheral vascular injuries were commonly treated by ligation and were associated with an amputation rate of 50%. In the Vietnam War the amputation rate was less than 15%. Materials and Methods: During the period April 2002 – 2003 we treated 25 patients with penetrating arterial injuries. Their age ranged from 13 to 49 years old. 23 patients were males, 2 were women. In 22 cases the injuries were caused by shotguns, two cases by knife injuries and 1 case was a jatrogenik one. In 13 patients the arterial injury was associated with injuries to other systems. In 9 patients we performed by-pass operations (36%). In 7 of these patients -77.8% we used autologous vein conduit and Dacron in 2 other cases – 22.2%. Our preferred choice was the great saphenous vein conduit. In 2 we performed an end to end anastomosis; in one case we performed thrombectomy with insertion of a stent. In the other case we put a lateral suture. In 11 cases ligature of the artery was done. In one patient immediate amputation was done due to the advanced signs of ischemia. The surgical interventions were carrying out under general endotracheal anesthesia. Results: In the patients to whom reconstructive surgery was done we had no deaths or limb amputations. In the patients in which ligature of the artery was performed, we had three limb amputations at different levels. One of these patients died due to pulmonary embolism. Conclusions: We performed reconstructive surgery in the patients, which reached our center in the first hours after injury, preferably six hours. In these patients we had better results even with those were reconstructive surgery was done 6 hours after injury. In such patients we had compartment syndrome, partial muscle necrosis, or neuropathy due to prolonged ischemic time. Amputations were performed either in-patients that came late in the hospital or in those with massive injury of soft tissues and injuries of other systems.

CERVICAL INSTABILITY IN ODONTOID AGENESIS

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We describe a case report of a young patient who presented to our Emergency Medicine Department with neck pain after a motor-vehicle accident. Cervical spine X-Ray demonstrated complete agenesis of peg. Odontoid agenesis is usually an incidental finding in an emergency department. A small number of cases have been reported worldwide. Patients with cervical spine injury and diagnosis of odontoid agenesis need thorough investigation of stability of the spine to prevent any neurological injury, which could prove fatal. They should be advised to avoid contact sport amongst other things. This article discusses different presentations of these patients and problems in managing them, as well as comprehensive literature review of the cases reported up to date. We have also included the algorithm for managing patients with this diagnosis.

PELVIC BINDER – AN EFFECTIVE ALTERNATIVE TO EXTERNAL FIXATOR IN ACUTE TRAUMA MANAGEMENT

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Unstable pelvic fractures present diagnostic and therapeutic challenges for the trauma team. Application of an external fixator to the pelvis is considered the mainstay in pelvic fractures management. In the hemodynamically unstable patient with pelvic fractures, stabilization of the pelvis is of utmost importance. Placement of an external fixator requires highly technical skills, special instruments and aseptic conditions in the trauma resuscitation bay. At The Tel Aviv Sourasky Medical Center, Trauma Resuscitation room, a pelvic binder is placed early during the initial assessment of the patient with an unstable pelvic fracture as a measure for pelvic stabilization. The binder is placed and wrapped around the pelvis while activating symmetric pressure on the pelvis bones. This binder is applied by the trauma team and does not require additional or trained personnel. This binder enables further radiological evaluation including angiography and embolization. Since we started applying pelvic binders, pelvic external fixators are applied in the operating theatre and only after patient evaluation accomplished. One should be aware that due to pressure on the skin caused by the pelvic binder pressure sores may develop, therefore early change to either external or internal stabilization should be considered.

LATERAL CANTHOTOMY FOR RETROBULBAR HEMATOMA – INCIDENCE OF OPTIC NERVE AVULSION

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Background: Anecdotally, 20-30% of the patients with a retrobulbar hematoma (RBH) who are treated with lateral canthotomy (LC) suffer optic nerve avulsion. LC relieves the pressure in the anterior chamber of the eye by a taught canthus also allows significant anterior movement of the globe possibly predisposing the optic nerve to avulsion. Objective: To determine an association of optic nerve avulsion after lateral canthotomy. Methods: Freshly slaughtered and skinned goat heads were used for the study. A flap of a medical glove was cut and sutured over each orbit to simulate the eyelids. A 20-gauge catheter was advanced into the retrobulbar space with placement confirmed by orbit CT. Ten milliliters of normal saline were injected into the retrobulbar space. Repeat orbit CT confirmed RBH. A lateral canthotomy preceded a repeat CT for optic nerve evaluation by a neuroradiologist. Results: N=37. 5.4% (2/37) globes suffered optic nerve avulsion after lateral canthotomy. Discussion: Although extravasation of fluid from the Retrobulbar space occurred, there was no direct or inverse association with optic nerve avulsion. Conclusion: Although lateral canthotomy is thought to be a vision saving procedure in the setting of retrobulbar hematoma, 5% may suffer optic nerve avulsion and blindness in the affected globe from the procedure itself. Limitations: Non-living animal model. Small numbers.

RETROBULBAR HEMATOMA AND OCULAR PRESSURE: RESIDENT TRAINING IN THE ASSESSMENT, DIAGNOSIS AND TREATMENT USING APPLANATION TONOMETRY

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INTRODUCTION: Retrobulbar hematoma (RBH) warrants urgent decompression due to serious consequences of treatment delays. Anecdotal evidence suggests a rise in ocular pressure secondary to RBH. Applanation tonometry measures elevation of ocular pressure. Lateral canthotomy (LC) relieves pressure in the anterior chamber thereby relieving ocular pressure. Canthal lysis a more invasive procedure may be used in RBH unresponsive to LC. Manometric determined OP rises in RBH and falls with treatment. OBJECTIVE: To determine if applanation tonometry can be used to evaluate RBH and the effectiveness of its treatment. Also, to demonstrate the use of a Tonopen resident teaching module for evaluation of elevated intra-ocular pressures and RBH. METHODS: Porcine orbits were used in an IACUC approved laboratory. 10 cc of normal saline were injected into the retrobulbar space using a technique developed under CT in a previous study. RBH was confirmed by Ultrasound Residents were instructed on the appearance of proptosis, on digital palpation for OP, on the use of Tonopen XL, and on the techniques of LC and CL. Attending determined OP by tonometry served as controls before and after RBH and after LC and CL Measurements were compared to resident determined ocular pressures. RESULTS: N =3D 12. Resident obtained pressures averaged from 2-3 resident determinations. OP rose with RBH and fell with LC in both controls and resident determined values. One orbit required an additional CL for the measured pressures to fall within normal values. DISCUSSION: No statistical differences were seen between attending and resident measurements of OP. CONCLUSION: OP rises with RBH and falls with treatment and can be measured by applanation tonometry. Tonometry may assist in the diagnosis of RBH and in assessing the efficacy of treatment. Residents after a brief in-service on tonometry have concordance with controls. LIMITATIONS: Non-living animal model. Small numbers. Un-blinded observers.

TRAUMA HOT SPOTS IN AN URBAN AREA: IS IT POSSIBLE TO DETERMINATE THE GEOGRAPHIC DISTRIBUTION OF TRAUMA?

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Introduction: Trauma is a major cause of death and disability worldwide. Several studies have suggested that trauma have specific pattern regarding about prevalence and mechanism. Objective: The aim of this cross-sectional study was to determinate the geographic distribution of trauma in the city of Tehran, to improve the trauma systems. Method & Materials: Tehran is the most populated city in Iran, which hosts 6,758,845 people. There are 22 Municipal areas in Tehran. Eighty-eight hospitals admitting trauma victims are included in this study. On certain days (41 days) educated interviewers collected data about trauma patients. Results: During the 41 days of data collection, 38,741 out patients were referred to the hospitals due to trauma and 4,362 patients were admitted .The mean patient age was 30 years and 78% were male. The major mechanism of injury was traffic accident (39.4%) followed by fall (27.4%), sharp injuries (11%). The most eventful areas of Tehran were as follow: area 4(7.5%), area 16(6.5%) and area 20(5.1%). Considering road traffic accidents and falls into account as the major causes; area 12 and area 4 were the most frequent sites of occurrence respectively. Conclusion: The findings of this study show a high prevalence of trauma in the specific areas (Trauma Hot Spots). The data can be utilized by different organization for example to figure out the capacity of patient admission for each hospital under observation.

ESTABLISHMENT OF A TEACHING ANIMAL MODEL FOR SONOGRAPHIC DIAGNOSIS OF TRAUMA

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Aim: To define intra-abdominal and intra-thoracic fluid volumes that can be detected by sonography and their relation to fluid width in pigs so as to establish a clinically relevant animal model for teaching and training. Methods: Different volumes of normal saline were infused into the abdomen (50 ml – 2000 ml) and chest (25 - 250 ml) in five anesthetized pigs. The maximum width of fluid as detected by ultrasound was recorded. The right upper quadrant, left upper quadrant, pelvis, and the right paracolic section of the abdomen and right pleural cavity were studied. An experienced radiologist performed the studies. The effects on respiratory and cardiovascular functions were evaluated. Results: The sonographic findings in the pig were similar to those in man. Up to 50 ml of intra-abdominal fluid, and up to 25 ml of intra-thoracic fluid could be detected by ultrasound. There was a significant correlation between the volume infused and the fluid width detected. The respiratory and cardiovascular monitoring of the animals showed that the infused intra-thoracic volumes mimicked a survivable hemothorax. Conclusions: The pig may serve as an excellent clinically relevant model to teach surgeons detection of different volumes of intra-abdominal and intra-thoracic fluids. The value of this model as an educational tool has yet to be tested.

FOCUSED ABDOMINAL SONOGRAPHY IN TRAUMA (FAST) - MAFRAQ HOSPITAL EXPERIENCE

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Objectives: To determine; (a) The value of Focused Abdominal Sonography in Trauma, at the Accident & Emergency department of Mafraq hospital,(b) The level of confidence and status of referral by the Emergency Medical Officer. Methods: We evaluated total of 234 patients between January 1998 & August 2000. Ultrasound was done by the Radiologist on call, and patients with FAST positive were re-evaluated for organ injury, immediately. FAST negative patients with high clinical suspicion of abdominal injury were re-evaluated with DPL or CT scan. FAST positive patients with no clinical indication of abdominal injury were also further investigated with CT scan. Results: 234 patients were evaluated with FAST, among which 103 patients were both positive for FAST & injury. Of the 128 patients with negative FAST, 12 patients had visceral injury. Among these 12 patients, 3 were diagnosed with DPL to have hemoperitoneum, 3 had positive organ hematoma without any hemoperitoneum, and 6 patients developed an ooze in to peritoneal cavity which was diagnosed at later scans only. In view of the findings, Sensitivity of FAST was 89.5%, specificity of 97.4%, with positive predictive value of 97.1% & negative predictive value of 90.6%. Conclusion: FAST is highly sensitive and specific for abdominal injuries with the values obtained by us correlating to that of other major Trauma centers. As both PPV and NPV for FAST are high, patients with high clinical suspicion of injury but negative fast should be evaluated with DPL & CT scan. Patients with clinical suspicion for injury but negative FAST should be re-evaluated after 24 hrs to detect vascular ooze. The confidence and awareness of emergency medical staff in FAST grew over the years.

IMPACT OF A NEW EMERGENCY DEPARTMENT ULTRASOUND FELLOWSHIP ON EMERGENCY DEPARTMENT ULTRASOUND UTILIZATION

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Introduction: To describe how a new emergency ultrasound fellowship impacted emergency department ultrasound utilization. All emergency department residents and attendings both before and after the onset of the ultrasound fellowship completed a 16 hour two day hands-on ultrasound course. Methods: Emergency medicine residents (n=41) and attendings (n=18) performed and printed out emergency ultrasound scans from GE Logiq-400 machines. The scans (aorta, FAST, biliary, OB/GYN, renal, and cardiac) were attached to an ultrasound data sheet. The scans were interpreted for accuracy by ultrasound fellows (2) and ultrasound fellowship directors

(2). Weekly scan review sessions providing critical feedback were held. One of the fellowship directors (Riley) gave a monthly didactics/hands-on mini course. Scans performed 12 months prior to the start of the fellowship (July 1, 2002) were retrospectively entered and scans for the first 6 months of the fellowship were prospectively entered into a quality assurance database. Cumulative count frequency data was obtained from the database and analyzed using SPSS. Results: 2461 ultrasound scans were performed from July 1, 2001 to December 31, 2002. 281 ultrasound scans were performed from July 1, 2001 to June 30, 2002. 2180 ultrasound scans were performed from July 1, 2002 to December 31, 2002. During the six months of the ultrasound fellowship fellows performed 459 scans, visiting emergency medicine residents performed 464 scans, and ultrasound fellowship directors and SLRHC rotating residents performed 885 ultrasound scans. Discussion: We observed that after starting an emergency ultrasound fellowship with two emergency ultrasound fellows, emergency department ultrasound use increased dramatically. However, the majority of this increase was due to scans performed by rotating residents, fellows and directors. Future efforts will focus on increasing ED ultrasound use among the majority of non-rotating attendings and residents. Conclusions: The utilization of emergency department ultrasonography exponentially increased after the start of a new emergency ultrasound fellowship with weekly review and feedback sessions and monthly mini-courses. This occurred among emergency medicine residents and attendings who already participated in a two day 16 hour review course.

ULTRASONOGRAPHY CONTRIBUTION IN THERAPEUTICAL MANAGEMENT OF SPLEEN TRAUMA

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Purpose: Establishing the role of ultrasonography (2D, Doppler and ultrasound guided needle aspiration) in choosing the timely moment of surgical therapy at patients received in Emergency Department with traumatic spleen injuries. Materials and method: The study included 21 patients admitted in Emergency Room with history of abdominal trauma and who had at the first ultrasound examination spleen lesions. Abdominal ultrasonography, at the beginning and in dynamic reevaluations, was performed with high ultrasound equipment using 3-5 MHz sectorial transducer. Anesthesiology risk of patients was established using "A.S.A." score. Results: The first ultrasound examination classified the patients into two groups: I) 14 patients who needed immediately surgical therapy indifferently of "A.S.A." established risk -10 with ultrasonically signs of spleen tear and heamoperitoneum and 4 with previous ascites who needed ultrasound guided needle aspiration for haemoperitoneum confirmation. II) 7 patients with minor/medium spleen injuries without haemoperitoneum (5 among those had "A.S.A." >=3, in case of whom was decided initially conservative therapy and dynamics ultrasound evaluation at 12 hours on the first 3 days and daily on the next 11 days).Three patients among those developed spleen tear and haemoperitoneum, needed surgical therapy in evolution. Conclusion: 1.In Emergency Department, ultrasonography is the first tool in the diagnosis and management of trauma spleen injuries.2.Ultrasonography and ultrasound guided needle aspiration is an election method to certify the haemoperitoneum in case of patients with previous ascites. 3.Ultrasonography could change therapeutic management in case of patients with minor/medium trauma spleen lesions and high anesthesiology risk("A.S.A.">=3).

ACCURACY OF RESIDENT-PERFORMED LIMITED COMPRESSION ULTRASONOGRAPHY FOR THE DIAGNOSIS OF DEEP VENOUS THROMBOSIS

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Deep venous thrombosis (DVT) is commonly encountered in emergency medicine (EM). Routine clinical evaluation does not reliably diagnose this condition. Limited compression ultrasonography (LCU) has been shown to be as accurate as duplex ultrasonography or impedance plethysmography, when performed by radiologists or sonography technicians. However, the accuracy of LCU performed by EM residents has not previously been evaluated. Objective: To determine the accuracy of resident-performed LCU during and after a 4-week training program in EM bedside ultrasonography (EMBU). Methods: EM residents undergo a 4-week training program in EMBU, including LCU. Residents are instructed by an experienced EM physician sonographer. Training includes didactic instruction, proctored exams, and oral and written testing. LCU studies were accomplished during and after the training period. Studies were done using a 5-10 Mhz linear array probe on a Toshiba JustVision machine. LCU was performed on the common femoral and the popliteal veins only. Results were compared with reference imaging studies (RIS) performed by radiologists or vascular specialists, consisting of either duplex ultrasonography, contrast CT of the lower extremities, or venography. Results: 145 LCUs were performed. 55 LCUs were positive (+) of which 4 were identified as falsely + by RIS. Of 90 negative resident LCUs, 8 were deemed + by RIS. In this study, LCU has a sensitivity of 86% and specificity of 95% for the detection of DVT. After training period, residents 20 studies were accomplished of which 11 dvts and 9 normal studies were correctly identified. Conclusions: Resident performed LCU is a useful test in the diagnosis of DVT during and after a period of basic training in EMBU. Investigation of the accuracy of residents with greater EMBU experience is warranted.

VALUE OF ULTRASONOGRAPHY AS FIRST CHOICE EXAMINATION FOR THE DIAGNOSIS OF ABDOMINAL COLLECTIONS IN MEDICAL/SURGICAL EMERGENCIES. PROSPECTIVE STUDY ON 100 PATIENTS

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Purpose: The evaluation of US examination's importance as a first choice imaging method in medical/surgical emergency, considering its reliability and relatively low cost. Materials and Methods: A study on 100 patients reporting to the emergency service with the clinical feature of medical/surgical abdominal emergency. The patients were US (standard and colour Doppler) examined. In some cases interventional

US-guided maneuvres were performed. Results: US examination infirmed one abdominal collection in 21 cases. In 79 patients US confirmed as having abdominal collections, 26% were acute appendicitis, 33% haemoperitoneum due to a solid/cavitary organ rupture, 13% strangled eventration, 7% acute colecistitis, 7% acute pancreatitis, 7% cirrhosis and 7% acute salpingitis. In 20% cases US-guided punction of the abdominal liquid was requested. Insertion of the results in tables including presumptive, ultrasonographic, other imaging examinations' (RX, CT), intraoperative and histopatological diagnosis was followed by statistic evaluation. Conclusions: US examination of abdominal collections in medical/surgical emergencies, as a first choice imaging method, was proved to have high sensitivity and specificity; there were statistically significant (p<0,0001) differences between emergency diagnosis and US diagnosis while those between US diagnoses and intraoperative diagnosis were statistically insignificant.

EFFICACY OF D-DIMER AND COMPRESSION ULTRASONOGRAPHY IN THE DIAGNOSIS OF DEEP VEIN THROMBOSIS IN THE EMERGENCY DEPARTMENT

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Objectives: Lower extremity duplex ultrasonography for the emergent diagnosis of deep vein thrombosis (DVT) is not universally available at all times in some hospitals. We therefore studied the incorporation of emergency physician compression ultrasonography (EPCUS) and D-Dimer into a clinical algorithm for the bedside diagnosis of DVT. Methods: Eighty patients suspected of DVT enrolled on a convenience basis. Two hours of initial didactic and hands-on training provided. Excluded patients with symptoms greater than one week, chronic DVT, or on anticoagulation. EPCUS: two-point femoral and popliteal compression ultrasound. All patients had comparison to the reference standard of radiology-performed lower extremity duplex ultrasonound. EPCUS was performed at the bedside prior to the confirmatory study. D-Dimer testing also assessed using the VIDAS rapid ELISA assay Results: Fourteen of the 80 patients (17.5%) enrolled had confirmed DVT 15 EPCUS studies were positive - 14 had confirmed DVT (93.3%) 54 EPCUS studies were negative (100% confirmatory agreement) 11 EPCUS studies (13.8%) were equivocal, (81.8% negative on confirmatory exam) No false negative scans amongst negative EPCUS studies One false positive scan amongst positive EPCUS studies Two equivocal EPCUS studies had confirmed DVTs, both performed by novice sonographers Amongst non-equivocal exams, EPCUS was 100% sensitive and 98.2% specific for DVT 14 patients had a negative D-Dimer, none of whom had DVT D-Dimer was 100% sensitive but only 21.5% specific for DVT Conclusions: In this limited study EPCUS had a 92.9% positive predictive value and a 100% negative predictive value for DVT in non-equivocal exams. D-Dimer only clinically useful when negative. Duplex US may be unnecessary when bedside EPCUS performed by qualified EPs clearly demonstrates no DVT. Confirmatory duplex US is indicated for positive or equivocal EPCUS exams.

CAN EMERGENCY MEDICINE RESIDENTS MORE RAPIDLY REMOVE SOFT-TISSUE FOREIGN BODIES WITH THE USE OF BEDSIDE ULTRASONOGRAPHY?

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Methods: This prospective, randomized, educational trial was performed at a University Hospital with a 3-year Emergency Medicine residency training program. 12 EM residents were randomized to two separate study groups. The two groups were asked to remove a known foreign body (metal staple) from a prepared chicken leg, the experimental group was asked to use a Sonosite 180 Plus bedside ultrasound machine as an aid during the procedure. Total removal time was recorded and compared between the two groups. Results: The group utilizing ultrasound took a significantly longer time to remove the foreign body (275 seconds on average for the ultrasound group vs 101 seconds without ultrasound). Limitations of this study were limited skills prior to the study within the resident group as to how to remove foreign bodies with ultrasound guidance. Also, our study was limited to a small group of residents (six in each group). The damage of the chicken leg was also not compared between the groups, observationally it was very evident that the control group's chicken legs sustained significantly greater tissue damage. We believe that more skilled and experienced emergency ultrasonographers will be able to more rapidly and accurately identify and remove foreign bodies. Further studies in this direction is warranted.

CHEST ULTRASONOGRAPHY: A REVIEW OF SONOGRAPHIC PATTERNS

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The normal filling of the lungs with air is an excellent barrier to ultrasounds. This basic rule of ultrasonography hampered the application of chest ultrasonography (CU) for a long time. However, the physiologic contents of lungs are replaced by liquid and/or solid lesions in some pathologic conditions which can be finally investigated by the ultrasonic beam. Moreover, the analysis of the artifacts produced in normal lungs gives further elements for a clinical use of ultrasounds in the setting of chest diseases. Sonographic patterns: On a normal CU three layers can be identified. First layer is the chest wall with skin, muscles and ribs generating a posterior acoustic shadowing. Second layer is made by both pleural layers; the visceral part of pleura can be seen sliding on the parietal part ("sliding" or "gliding" sign). Beyond the pleural line, only artifacts can be seen. Artifacts can be "horizontal" representing repetitions of the pleural line or "vertical" (comet tail artifacts). Pulmonary edema: Comet tail artifacts seen out of the area above the diaphragm and/or in a number = 3 in a frozen image can be considered "alveolar-interstitial syndrome". On CT scans it was demonstrated that artifacts are generated by thickened subpleural interlobular septa and can be considered equivalent to "Kerley lines" seen on CXR.

Pneumonia: On CU pneumonia lesions appear hypoechoic compared with the brightness of normal lung. Air or liquid bronchogram, bright dot-like echogenicities, vascular structures can be seen. Pleural effusion: Echographic pattern is different in exudates and transudates. Sensitivity of CU is better than CXR, and is helpful for therapeutic procedures as well. Pneumothorax: Absent gliding sign, increase in horizontal artifacts and absence of comet tail artifacts are the echographic pattern of pneumothorax. Pulmonary embolus:. Wedge shaped lesion can be observed. Discussion: CU can be helpful in Emergency Medicine for both diagnostic and teaching purposes.

CAN BEDSIDE ULTRASOUND VISUALIZE A FOREIGN BODY IN THE CALVARIUM?

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Background: Previous investigations have suggested that bedside ultrasound can be used as a screening modality to confirm the presence of a depressed skull fracture. Objective: To determine if bedside ultrasound can detect a foreign body in the calvarium through a depressed skull fracture. Methods: A hole measuring 1.5 cm was drilled into the calvarium of porcine heads harvested post-mortem from a procedure lab. Normal calvarium served as controls. Metallic nuts wrapped in aluminum foil simulating a 22-caliber bullet were placed at various depths directly below the fracture site into the brain. The simulated bullets were tethered in place by pre-measured suture material. The wound cavity was filled with gel and the skin stapled into place. Placement depth was verified pulling on the end of the attached suture with visualization of movement during real time-ultrasound (10 MHz). Fractures were restudied with bullets placed "off-center" from the fracture. Results: Each fracture site had a "column" of echogenicity below the disrupted bony cortex and served as a "window" into the brain parenchyma. The simulated bullet could be infrequently distinguished as an echodense structure within an echogenic column. An inconsistent finding was an echogenic tail distal to the bullet. "Off-centered" bullets could not be visualized. Conclusions: Bedside ultrasound may be used to reliably confirm the presence of a depressed skull fracture but cannot reliably distinguish a foreign body. Limitations: Non-living animal model. Unblinded study.

MODEL FOR TRAINING ULTRASONIC RECOGNITION OF A DEPRESSED SKULL FRACTURE: BLOOD VS CLOT VS CONDUCTIVE GEL

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Background: Ultrasonography is available in the emergency department to assist in rapid bedside diagnosis. Investigations have shown that bedside ultrasound imaging may confirm the diagnosis of a depressed skull fracture (DSF). Imaging was acquired using ultrasound gel to fill the cavity created by the DSF. Objectives: To determine if ultrasound conductive gel is a safe and representative substitute for blood or clot in investigative or training protocols. Methods: Eight porcine heads were harvested postmortem. The skin of each was reflected. Holes (1.5cm) were drilled for a total of 21 holes. Each skull fragment was depressed 1 cm onto the brain. Each site was filled with either ultrasound gel, clotted blood, or un-clotted blood and the skin flap replaced. Using a 10MHz probe, an operator familiar with sonography for DSF but blinded to the conductive medium in the DSF cavity, obtained the best image described as an echogenic column. Each of the 21 holes were randomly filled with alternate conductive media and then re-evaluated with ultrasound for a total of 63 images. Results: N = 63. Each set of three images for each DSF were ranked 1, 2 or 3 with 3 being the best image. The average score and sandard deviation was calculated to be: Clotted blood: 2.00 StD 0.71. Un-clotted Blood: 1.86 StD 0.854. Ultrasound Gel: 2.14 StD 0.91. Conclusion: Ultrasound gel placement in the wound cavity of a model for depressed skull fracture appears to be a representative substitute for un-clotted or clotted blood without the risk of blood born pathogen transmission.

VAGINAL ULTRASOUND PROBES AS A POTENTIAL VECTOR FOR CROSS-CONTAMINATION

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Background: Vaginal ultrasound (VUS) probes are a potential source of cross-infection. Objective: To determine if VUS probes act as a vector for cross-contamination following manufacturer recommended cleaning procedures. Methods: To determine if VUS probes can transfer colony-forming units (CFU) from patients to agar plates after two simple cleaning methods. Before use, each probe was cleaned using both an alcohol wipe and Transeptic® spray and then swabbed to inoculate one of four blood agar plates. After use and removal of the condom, the probe was swabbed to inoculate a second plate. All probes were cleaned by either alcohol wipe only or Transeptic® spray and an alcohol wipe. After drying, each probe was swabbed to inoculate a third plate. The fourth blood agar plate was inoculated using a swap from the investigator's mouth as a positive control. All used condoms were inspected for leakage. All plates were examined for growth by a lab blinded to the cleaning method. Results: N=36. Alcohol only: 18. Alcohol and Transeptic® spray: 18. No condom leakage was observed. Two specimens were excluded as the positive controls plates had equivocal results. All plates of both groups had no CFU after 48 hours incubation. One plate of a swab before cleaning and before use had CFUs. Conclusion: The use of a condom and a simple cleansing method such as an alcohol wipe with or without using Transceptic® spray is sufficient to prevent transmission of CFUs.

EVALUATION OF ULTRASONOGRAPHIC FINDINGS OF 336 PATIENTS WITH ACUTE CHOLECYSTITIS

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Objective: The aim of the study was to evaluate the ultrasonographic (USG) findings in acute cholecystitis patients who presented to the emergency department (ED). Method: We enrolled patients who presented to the ED and

were admitted to the surgery ward with acute cholecystitis between January 1991 and December 2000. Patient records were reviewed for age, gender, period of the pain, and USG findings. Results: 336 patients presented to the ED during the study period. Mean age was 55.7 (range 19 to 89). 152 patients (45.2%) were 60 years of age or older. 212 (63.1%) patients were female. Patients presented with less than 6 hours of pain in 18.2% of cases, while 197 cases (58.6%) had more than 12 hours of pain at the time of ED evaluation. No gallbladder stone was found in 55 (16.4%) of cases. 78.3% of cases with gallstones had more than one stone. Gallbladder wall thickness was less than 3 mm in 223 (64.4%), 3 = 5 mm in 55 (16.4%), and more than 5 mm in 58 (17.3%). 7.7% of cases had pericolic fluid, and 27.7% had gallbladder distention noted on ultrasound. 9.2% of patients had a sonographic Murphy sign. There was no significant relation between period of pain and USG findings, except presence of the pericolic fluid which was more frequent in patients who present with more than 12 hours of pain (p=0.046). There was significant correlation between wall thickness and having a gallstone, pericolic fluid, and sonographic Murphy sign (p=0.003). Conclusion: Considerable number of cases presented more than 12 hours after symptom onset. Most of the cases had more than one stone in their gallbladder. Gallbladder wall thickness was not found in most of the patients with acute cholecystitis. Pericolic fluid and sonographic Murphy sign are less than 10 percent, and they are late signs.

Spanish Abstracts

PREHOSPITAL NURSE CARE IN ACUTE CORONARY SYNDROME (ACS)

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The ACS is a very common situation in emergency cases. As the patient is constantly moved from one setting to another, the nurse in charge should take up a series of actions which will help managing possible complications; the correct sequencing of the planned caring in each one of the settings, and the actions generated, will be crucial in the treatment and surveillance of complications. Objectives: General: improvement of the nurse care in the ACS prehospital situation Specific: - To carry out a nurse care planning for specific use in ACS cases in prehospitalizing - To describe actions in the various prehospital settings Materials and methods: - Reviewing of bibliography related to protocol of actions and nurse care in ACS cases - Analysis of different action settings through the Nurse Care Process using Virginia Hendersons´ model. Results: In prehospital situation, there exist al least four different settings during the ACS care. Through the Nurse Care Process, we evaluate changes in the needs of the patient and in the nurse diagnosis, the priorities of which are dramatically altered in each situation. 1. Incident site: impaired gas exchange, altered tissue perfusion, 2. Moving the patient to the ambulance: high risk for activity intolerance, high risk for altered body temperature, 3. In the ambulance: relocation stress syndrome, 4. Transfer to hospital: altered role performance, If we are to compare prehospital situations with any other, we may asses that in our case we cannot proceed to evaluation-planning-execution in that sequence. All these stages are simultaneous and subject to rapid changes, given the special characteristics of the settings. We may only have seconds or minutes from one stage to the other. We must be extremely vigilant. Circumstances force us to revaluate changes in the setting and the situation of the patient. This is crucial in order to carry out necessary actions: improving the physical space, rapid access to the breast of the patient, evaluation of the need of preparing drugs, consider placing multifunction electrodes, verbal and no-verbal communication,...These actions are continuously evaluated by the nurse and the doctor, given the tight connection between the medical and the nurse actions in our environment. Conclusion: The application of this nurse care program will make easier the ACS treatment in extrahospitalary situation and will help solving complications. We are certain that using this process will mean improving the quality of nurse care, as patient is considered a bio-psycho-social being.

VARIABLES AT EMERGENCY DEPARTMENT TRIAGE WHICH HELP THE CORRECT LOCATION OF PATIENTS PRESENTING WITH DYSPNEA

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Aims: To determine which variables could help at triage to locate patients who present dyspnea at appropriate level of care. Method: Prospective study of 112 patients who presented with shortness of breath at the emergency department triage, with a pulse oxygen saturation (SpO2)>90%, initially located at level I (mild patients). Personal data, SpO2 by pulse oximetry, vital signs, brief medical history, and clinical follow-up were collected. Results: Twenty-five patients wrongly located at level I were detected. They presented, compared to located well patients, with a lower SpO2 (95,6 ± 2,36% vs 96,8 ± 2,06%); p<0,01), higher respiratory rate (26,04 ± 4,59 breaths/min vs 22,13 ± 6,05 breaths/min; p<0,004), and temperature (36,91 ± 0,83 ºC vs 36,44 ± 0,56 ºC; p<0,01). More patients of the wrongly located group versus the well group had previous history of Chronic Obstructive Pulmonary Disease (COPD) [13 (52%) vs 21 (24,1%); p<0,008]. Logistical regression analysis was performed and showed that respiratory rate =24 breaths/min and temperature >37,5ºC were the best cut off points to assign patients to level II (seriously ill patients). Conclusions: Respiratory rate, temperature and previous history of COPD are useful tools, in addition to SpO2, to locate patients who present with dyspnea in the triage emergency department.

SITUACIÓN ACTUAL DE LOS FACTORES DE RIESGO CARDIOVASCULARES EMERGENTES EN EL CONTEXTO DEL SÍNDROME CORONARIO AGUDO

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Objetivos: Conocer la prevalencia y determinar la asociación de hiperhomocisteinemia y de infección por Chlamydia pneumoniae en el Síndrome Coronario Agudo (SCA), comparar los niveles séricos de marcadores de inflamación entre la población general y las diferentes formas clínicas del SCA y conocer los cambios atribuibles a la nueva definición de infarto de miocardio (Joint European Society of Cardiology/American College of Cardiology Committee, 2000). Metodología: Estudio seroepidemiológico, analítico de casos y controles (1:2), no apareados sobre una muestra de 198 controles y 98 pacientes con SCA. Resultados: 1. La prevalencia de homocisteinemia superior a 12 mcrmol/L en pacientes con SCA fue del 51%. La seroprevalencia a Chlamydia pneumoniae en los casos fue del 94.6%. 2. La proporción de pacientes expuestos a homocisteína por encima de 12 mcrmol/L fue significativamente superior en pacientes varones con SCA entre 55 y 64 años respecto a los pacientes sin enfermedad coronaria. 3. La seroprevalencia de anticuerpos a Chlamydia pneumoniae con título superior a 1:64 fue significativamente mayor en la población con SCA que en los controles. 4. El aumento de proteína C reactiva y de Fibrinógeno se asoció significativamente con la presencia de daño miocárdico en los pacientes con SCA. 5. Existen evidencias significativas que apuntan a elevaciones discretas de la proteína C reactiva en pacientes con angina inestable sin daño miocárdico determinado por troponinas, frente a población control. 6. Los factores de riesgo tradicionales continúan siendo determinantes en el SCA. El sexo varón y la hipercolesterolemia se mostraron como los más significativos. 7. La aplicación de los criterios de la nueva definición de infarto, modificó sustancialmente el diagnóstico de infarto agudo de miocardio en el SCA objetivándose un aumento significativo de su prevalencia pasando del 34.7% al 53%.

INFLUENCIA DE LOS CUIDADOS PREHOSPITALARIOS EN LA SUPERVIVENCIA DEL TRAUMA PEDIÁTRICO GRAVE

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Introducción: En nuestra sociedad el trauma es la principal causa de muerte en la niñez. Objetivo: Analizar la asistencia sanitaria de los niños traumatizados graves realizada por unidades de soporte vital avanzado (USVA) de un servicio de emergencia prehospitalaria de Madrid (SAMUR- PC) y la supervivencia en los 7 primeros días. Metodología: Descriptivo retrospectivo de la asistencia a niños traumatizados graves de 0 a 16 años desde enero de 1999 a julio de 2002. Variables: edad, etiología, constantes iniciales, puntuación inicial en la Escala de Coma de Glasgow (GCS),Trauma Score Revisado(RTS) e Índice de Trauma Pediátrico (PTS), cuidados, tiempo de asistencia, patología principal y supervivencia a las 6, 24 horas y 7 días. Análisis estadístico con SPSS. Resultados: Se atendieron 80 niños. La edad predominante fue de 12 a 16 años (46,25%). Los accidentes de tráfico (60%) fueron la causa más frecuente y el TCE la lesión principal (38%). Recibieron oxigenoterapia 78, precisando 30 de ellos intubación orotraqueal. Se colocaron 6 sondas gástricas y 2 drenajes torácicos. Se canalizó al menos una vía venosa periférica a 77 y una vía central a 2. Un 70% recibió analgesia intravenosa y un 21,3% otro tipo de fármacos. Al 81,3% les fue colocado un collarín cervical añadiendo otros dispositivos de inmovilización y/o movilización en un 80% de casos. Tiempo medio de asistencia in situ de 00:27:06 (DE:00:11:23). El PTS medio fue de 6,60 (DE:3,71) y el RTS medio de 6,77 (DE:1,56). El GCS fue < 9 en 22 casos. Supervivencia a las 6 y 24 horas del 93,7% y a los 7 días del 90%. Diferencia significativa entre los valores medios de los tres índices y la supervivencia a las 6 y 24 horas y a los 7 días ($p< 0.001$). Conclusiones: Una atención inicial rápida y de calidad por los equipos de emergencia prehospitalaria es fundamental para lograr la mayor supervivencia posible sin secuelas. Los índices de severidad calculados son buenos predictores de supervivencia en niños traumatizados graves.

COMPUTED TOMOGRAPHY FOR SUSPECTED RUPTURED ABDOMINAL AORTIC ANEURYSM ? FALSE-POSITIVE CLINICAL DIAGNOSES. OUR EXPERIENCE AT AN INSULAR HOSPITAL

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Ruptured abdominal aortic aneurysm may be misdiagnosed, leading to significant delay in treatment. Purpose: to report our experience of false-positive clinical diagnoses confused with ruptured abdominal aortic aneurysm. Methods: CT and medical records of 10 patients, 1994-2000, with clinical misdiagnosis of ruptured abdominal aneurysm were reviewed. All patients were evaluated for: (clinical records: age and gender; maximum aortic size, etiology or site of active bleeding, anatomical spread of hematoma and outcome). Results: Males (7/10), females (3/10), 4/10 (40%) died. Average age: 50. No abdominal aneurysm was found. Etiology-Site of rupture: pancreatic pseudoaneurysm, enphysematous pancreatitis, necrohemorrhagic pancreatitis, wünderlich syndrome, aortic disection: celiac-trunk, (2) left iliac, massive rectus sheath haematoma, and 2 gynecological massive bleeding neoplasms: inmadure and malignant teratoma and sarcoma uterine. Hematoma extended into retroperitoneum in 40%, around pancreatic gland and perirrenal space, and mainly in pelvis in 60%. We identified active and the source of bleeding in all cases. Our results were confirmed by surgery. Discussion: CT is the technique of choice for evaluating these patients. Most patients come hemodynamically stable, and are referred to CT. Other causes of abdominal pain (including aortic disection, rectus sheath haematoma, retroperitoneal: pancreatic, kidney/adrenal diseases or gynecological bleeding) are shown in our report by CT. In all these cases, no aneurysm was found. Misdiagnosis is estimated in recent series in 4-20% of patients, leading to significant delay in treatment. Conclusion: We believe that all patients hemodynamically stable in whom this diagnosis may be uncertain, would benefit from CT. The surgeon and the radiologist must be prepared to respond rapidly, these patients may become unstable at any time.

COMPUTED TOMOGRAPHY OF RUPTURED ABDOMINAL AORTIC ANEURYSM. OUR EXPERIENCE AT AN INSULAR HOSPITAL

ALONSO FERNANDEZ EM, LECIÑENA ESTEBAN MA, MARTÍNEZ IGLESIAS JA, CENARRO SANZ A, RODRIGUEZ RIBAS C, CUÑAT MAFÉ A

Hospital Can Misses

CT plays an integral part of the diagnosis and preoperative assesment of ruptured abdominal aortic aneurysm. It is the most feared complication, mortality rate is about 50%. Purpose : to report our experience of ruptured aortic abdominal aneurysms. Matherials and Methods: CT scans, and medical records of 15 patients, 1990-2000, with this diagnosis were reviewed. All aneurysms were evaluated for: (clinical records: age and gender; maximum aortic size, ratio aortic lumen/thrombus; site of rupture: relationship to renal arteries , aortic side by identifying focally indistinct aortic margin, active bleeding, anatomical spread of hematoma and outcome of the patient). Results: All patients were males and had poor prognosis, 12/15, 80% died. Averaged age: 65 years. Averaged maximum aortic size: 8cm, range: (5-12) Averaged ratio aortic lumen/thrombus: 0.80, range: (0.50-0.94). Site of rupture: infrarrenal (100%); lateral 40%, posterior 30%, anterior 20%, undefinable 10%. Hematoma extended into one or both anterior or posterior pararrenal spaces: (53%), into perirrenal spaces (33%) and adjacent to aneurysm (13%). We identified active bleeding by using intravenous contrast in (70%). Discusion: Our results may suggest that the incidence of rupture increases with increasing aneurysm size, above 6 cm. The thrombus may contribute to avoid the rupture Typical findings include: anterior displacement of the aneurysm by a high density mass that extends into pararrenal and perirenal spaces, a focally indistinct aortic margin that corresponds to the site of rupture. CT should be done with contrast enhancement to determine active bleeding: its wall may be identified by calcifications while the lumen enhances. Conclusion: Although rigorous statistical analysis is imposible, we believe the study is representative of clinical practice. We hope it can help to define the role and accuracy of CT in the diagnosis and management of this emergency pathology at our insular hospital.

VALUE OF CT IN THE DIAGNOSIS AND MANAGEMENT OF PATIENTS WITH ACUTE ABDOMEN

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Purpose: To emphasize the importance of CT in the diagnosis and management of patients with acute abdomen. Most of these cases were managed with the clinical findings, and abdominal ultrasound, but when the diagnosis was unknown or more information was required, we performed abdominal CT. Methods and material: We retrospectively reviewed 403 TC of acute abdomen between January 1990 and August 2000. A final diagnosis was made by surgery. Early CT imaging was obtained within 6 hours after patient arrival. Results: 403 patients of acute abdomen were identified and the underlying causes were as follows: diverticulitis in 87/403 (21,6%), appendicitis in 73/403 (18,1%); bowel obstruction in 63/403 (15,6%); gastrointestinal perforation in 35/403 (8,7%), Acute cholecystitis in 31/403 (7,6%); pelvic inflammatory disease 31/403 (7,6%); necrotizing acute pancreatitis 23/403(5.7%); ileus in 23/403 (5.7%), cancer 13/403 (3,2%), ischemic bowel 10/403 (2.5%), aortic aneurysm rupture 8/403 (2%); hemorrhage, 6/403 (1.4%). These findings are similar to other studies. Conclusion: CT is a useful tool to provide valuable information to demonstrate the cause of acute abdomen. Allows a rapid, cost-effective evaluation of these patients.. CT represents a useful tool in the decision for surgical or nonsurgical management.

PROGNOSTIC FACTORS IN ACUTE PANCREATITIS: A UNI-MULTIVARIATE ANALYSIS

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Purpose: A prospective study to analyse the prediction of mortality and poorer prognosis in patients with acute pancreatitis. Methods and material: 275 patients with acute pancreatitis were reviewed from 1991-1999, and divided into mild 210 (76,64%) and severe 65 (23,35%) groups based on the Atlanta classification. We evaluated severity according to Ranson´s criteria and Apache II score, CT classification (Balthazar index, Hill, Van Kemmell´s classification, intraoperative findings). We performed a univariant and multivariant statistic study with lineal discriminant analysis. Results:Overall mortality 17/275 (6,18%). Surgical treatment 24/275 (8,75%). Gender, age, body mass index, etiology, Ranson´s score and Apache II did not correlate with mortality. Hill´s and Balthazar´s classification did not reach significance either. Only the Van Kemmel´s classification and the number of organs failure had statistic value ($p<0.01$). After lineal discriminant analysis, the association of more than 4 Ranson´s criteria, Apache II > 8, Balthazar´s index =>4, grades IV, V in Hill´s classification and 4 organ failure had a predictive value for mortality. Conclusion: The Van Kemmel´s classification and the number of organ failure had a predictive value for mortality. Balthazar´s index =>4, grades IV-V in Hill´s classification and 4 organs failure disclosed poor prognosis.

VALUE OF CT IN THE DIAGNOSIS AND MANAGEMENT OF PATIENTS WITH SUSPECTED ACUTE BOWEL OBSTRUCTION

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Purpose: A prospective study to evaluate the role of CT in the diagnosis of patients with suspected acute bowel obstruction in whom clinical and plain radiographic findings were inconclusive. Methods and material: We reviewed 59 patients of presumed bowel obstruction that were assessed with conventional CT between January 1991 and August 2000. The final diagnosis was established by surgery. Results: CT correctly distinguished between bowel obstruction and ileus in all cases and enabled us to modify an erroneous clinical diagnosis correctly in 14 (23.7%) of 59 cases; predicted the cause of obstruction correctly in 50/59 (84,7%) patients with confirmed bowel obstruction, but it failed to differentiate adhesions from internal hernias and radiation enteritis. CT imaging identified the obstruction site in all cases, strangulation in 27/59 (45,8%) patients and modified correctly the management in 12/59 (20.3%) patients, by changing a conservative management to an operative one. Conclusion: CT is a valuable diagnostic procedure in distinguishing obstruction from paralytic ileus. It frequently establishes the cause, site of the obstruction and the presence of strangulation. CT findings lead to decisions to treat patients surgically in a significant number of patients.

BACTEREMIA IN PATIENTS DISCHARGED FROM THE EMERGENCY DEPARTMENT

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Objectives: We have analysed patients who have had an HC, paying special attention to the evolution of those who are discharged from the emergency department. Methodology: A descriptive, retrospective study has been conducted, based on the case-history of patients with positive HC performed in Emergency Department over a period of a year. The diagnosis, responsible germs, their resistance to treatment, together with whether the initial diagnosis or treatment has had to be changed, has been evaluated. Results: HCs have been performed on 870 patients in Emergency Department, at least one in 94 showing positive results, giving a percentage of 10.8 %. Of 87 patients with bacteremia, 52 presented alteration of basal condition or immunodeficiency, and all except 3 were admitted. Of the 35 patients without basal alteration, 22 of them were discharged. The most frequent diagnosis was urinary infection, followed by pneumonia and infection of soft tissue. The process progressed towards a septic condition in 18 cases, 10 of urinary origin and 5 of abdominal origin, none of them had been sent home from Emergency Department. The germ most frequently isolated has been E. Coli, followed by Pneumococcus and Staphylococcus Aureus. Antiobiotics most frequently prescribed are, in this order, Amoxicillin-clavulanate, Ciprofloxacin and Ceftriaxone. Resistance to the initially prescribed antibiotic treatment has been detected in 5 cases. As a consequence of the process, 8 pa-

tients died, all of them admitted to our centre or to another to which they were transferred. Conclusions: Even though the existence of bacteremia is an unfavourable sign, we believe that patients in an overall good state of health and without any debilitating illnesses, who undergo an HC and in whom an aggressive evolution of the infection is not to be expected, may be discharged with monitoring by their doctor and control appointments, as long as there is a quick means of contact in case of bad evolution or if the result of the HC and the antibiogram suggests that this is necessary. Given the low cost-effectiveness of the HCs performed, it remains to be evaluated whether they are the most indicated procedure.

ACUTE CORONARY SYNDROME: QUALITY CLINICAL INDICATORS IN THE EMERGENCY DEPARTMENT

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Objectives: To analyse and study the basal Acute Coronary Syndrome (ACS) Quality Clinical Indicators (QCI) in the emergency departments of two regional. Included in the ACS were: unstable angina (UA) and acute myocardial infarction (AMI). Methodology: Transversal, observational and retrospective study of patients with ACS, attended consecutively in the Emergency Department of our two centres over a period of one year. Results: We included 201 patients a year before introducing the PCG. The overall average age was 70.42 years ± 11.30, with 60 % male. The duration of pain before consulting Emergency Department was 7 ± 7.7 hours. In ACS, 140 (70 %) cases were presented as an UA and 61 (30 %) as an AMI. Only 1 (0.5 %) patient exitus in Emergency Department. Thirteen (6.5 %) of all the patients were transferred to an Intensive Care Unit (ICU). In the ACS were used: sublingual nitrates (60 %), endovenous nitrates (82.3 %), antiaggregants (81.3 %), betablockers (30 %) and calcium antagonists (25 %). Of the patients with UA, seventy (53 %) out of 132 were administered heparine where indicated. Of the total AMI patients, 45.90 % (28 cases) were thrombolysis candidates, and this was performed in 12 (42.85 %), two (16 %) in a period of < 30 minutes, and 10 in 2 or less hours, and only 2 of the total were women; in 16 (26.22 %) of the AMI patients, morphine was used; in 13 (23.2 %) of the total number of patients where it was indicated, treatment was administered with Angiotensin Converting Enzyme Inhibitors (ACEI). Conclusions: An outstanding feature is the delay of patients with ACS in consulting Emergency Department. The diversion to ICUs has been minimal in spite of all the PCGs' recommendations, with a low morbidity and mortality, a fact which could make it necessary to reconsider or determine better indications for transfer. We detect an appropriate use of antiaggregants, together with a tendency already described to under-use betablockers and, especially, heparine in UA. In the AMIs, infrequent use of thrombolysis is evident (especially in women) with a correct door–needle time, as well as infrequent use of the ACEI. This basal study, together with the introduction of the PCGs, to improve care and initiate a quality improvement system in patients with ACS

"SHORT STAY UNIT" DEPENDENT ON THE EMERGENCY DEPARTMENT: CREATION, PUTTING INTO OPERATION AND ANALYSIS

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Objectives: To analyse and describe the putting into operation of a Short Stay Unit (SSU) in a casualty department of a regional hospital. Methodology: Transversal, observational and retrospective study of all the patients admitted consecutively to the new SSU over a period of three months. This unit has 8 single all-purpose beds and is managed by a specialist doctor from the casualty department. Results: We included 495 patients. The average age was 62 ± 27.33 years with 54.7 % male and 45.3 % female. 71.9 % were patients admitted through Internal Medicine. The daily occupation and rotation rate was 70.3 %. The average stay was 24'48 ± 20 hours. Of the total number of patients admitted to the SSU: 54.9 % were there under observation ("SSU properly speaking"), and 45 % were there because of lack of beds, being considered as admitted to the ward ("awaiting a ward bed"). With respect to the destination upon discharge from the SSU, 47.5 % were definitively admitted to the hospital (this was indicated in the case of 72 % of these patients from the beginning) and 52.5 % of the patients were discharged: 38.5 % to their homes (86.4 % of these had been admitted for observation) and 14 % were transferred to another centre (this was initially programmed for 78.1 % of these patients). The percentages for those readmitted in less than 72 hours, between 3 and 30 days and > 30 days for patients who were discharged from the SSU were 0 %, 1.6 % and 0.5 % respectively, against those who were admitted to the ward which were 0.42 %, 3.8 % and 1.7 %, respectively (p = NS). Conclusions: We would like to emphasize the result of the average stay, practically one day, which has been comparable to other kinds of units. The indication for admittance to the unit has been correct, making it possible to discharge from the hospital more than half of the patients who probably would have required admittance to the hospital wards, without an increase in patients readmitted. Over the period studied, the SSU has functioned as an observation unit, which is the reason it was designed and created, even though the possibility of using it as an area "while awaiting a ward bed" offers the casualty department a flexible drainage area, while offering the patient, medical, nursing and catering care which is more fitting, complete and comfortable.

APPROPRIATENESS OF HOSPITAL ADMITTANCE FROM THE EMERGENCY DEPARTMENT IN INTERNAL MEDICINE

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Objectives: To study the degree of inappropriateness in hospital admittance and its causes. Methodology: Transversal, observational and concurrent study of consecutive admissions from the Emergency Department to the internal medicine department of a regional hospital. We used the translated European version of the "Appropriateness Evaluation Protocol" (AEP). We carried out: 1. A pilot study for using the AEP; 2. A reliability study (kappa index) between the review-

ers; 3. The study itself; 4. Application of extra criteria if necessary. Utilization of the Chi-squared test, the student's t-test and multiple logistic regression adjustment calculating the odds ratio. We used SPSS version 8.0. Results: The average kappa index between reviewers was 0.80 - substantial - . We included 300 patients (1st June to 13th July, 2000, as a sample calculation). The average age was 67.57 years ± 17.55, with 56.7 % male and 43.3 % women. We detected 18.7 % inappropriateness for the following causes: 1. The diagnosis or treatment could have been conducted ambulatorily (83.9 %). 2. Admittance was premature (25 %); 3. An alternative resource was needed (10.6 %); 4. Ambulatory treatment failed to fulfill (1.8 %). We observed a significant tendency towards greater inappropriateness in women ($p<0.086$) and in the study patients ($p<0.097$). We detected a lesser inappropriateness in: higher ages > 75 years ($p<0.001$), when they did not deambulate ($p<0.009$), in cardiorespiratory pathologies ($p<0.0001$), in ultimately or rapidly fatal illnesses ($p<0.021$). We observed a greater inappropriateness in oncological patients ($P<0.0001$) and in patients who came to Emergency Department from medical consultancies or other centres ($p<0.0001$). On the other hand, the inappropriateness of admittance also determined higher average stays ($p<0.009$) and stays of more than 7 days ($p<0.024$). The logistic adjustment maintained significance for age, the female sex, admittance for non-tumoral cardiorespiratory pathologies, oncological pathologies and average stays. Conclusions: The degree of inappropriateness at our centre is within the normal range with respect to other studies and is intended to be the starting point of a study, control and evaluation and improvement programme to decrease inappropriateness in hospital admittance in internal medicine.

MENINGOCOCCEMIA IN THE HOSPITAL EMERGENCY DEPARTMENT OF A REGIONAL HOSPITAL

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Objectives: To present a descriptive analysis of the patients diagnosed with Neisseria Meningitidis (NM) infection over the last 6 years, treated at the Casualty Department of a regional hospital. Material and Methods: Records on 31 patients were obtained, conducting a descriptive analysis of microbiological tests, epidemiology, clinical presentation and treatment. Results: The incidence was 5 cases/100,000 inhabitants per year. Of the 31 patients studied, 68 % were male, the average age was 25.7 years (range: 9 months-88 years). 58 % were residents in the region. We detect fever in all cases and cephalea. Physical exploration showed the presence of petechial cutaneous lesions (68 %), a decrease in the level of consciousness (48 %) and meningeal irritation (38%). We identified serogroup B in 42 %, serogroup C in 20 % and unidentified in 18 %. A lumbar puncture was performed on 23 patients (74 %) detecting meningitis in all cases. Its culture showed negative results in 10 cases and positive in 13: serogroup B in 4, serogroup C in 4 and unidentified in 5 cases. Six patients gave a positive culture in CSF but with negative haemoculture (20 % of the total haemocultures). Sensitivity to penicillin, ceftriaxone, cefotaxime, cloranphenicol and rifampicine was found in all the samples (although in our area of influence, 22.2 % of meningococcus has intermediate sensitivity to penicillin). Intravenous (iv) cefalosporins was administered in all cases. Of the total number of patients, 3.2 % died in Emergency Department, 58 % were transferred to other centre – five of them with mechanical ventilation tubes. Conclusions: We observed a significant presence of foreign patients, male predominance, a higher average age and delay in clinical consultation in Emergencies. It stands out that there is a higher percentage of bacteriemia without meningitis (55 %) in relation to that published and an important number of cases with serogroup C (20 %). Although sensitivities to penicillin have been adjusted, we cannot recommend this initial empiric treatment because of the considerable number of prevalent intermediate strains. Finally, we would point out that the majority of patients required transfer to another higher-level centre and that one patient died in Emergencies, facts which emphasize the gravity of these infections.

PREDICTIVE FACTORS FOR REVERSION TO SINUS RHYTHM IN PATIENTS WITH AURICULAR FIBRILLATION DIAGNOSED IN THE EMERGENCY DEPARTMENT

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Objectives: Auricular fibrillation is the most frequent cardiac arrythmia. To become acquainted with the factors which determine cardioversion, and how we use antiarrythmic drugs at the Emergency Department (ED). Methods: A retrospective study is conducted on patients attended at the ED during the year 2002, diagnosed with Auricular Fibrillation (AF) of recent apparition. The following variables are analysed: age, sex, pathological history (PH), usual medication, symptoms, their time of presentation, medication administered at the ED, cardioversion and its duration. Results: A total of 98 AF of recent apparition were detected, with an average age of 67 +- 14 years (range 28-90). 56 % were male. The PH were: previous episodes of AF, 52 %; arterial hypertension (AHT), 46 %; ischemic cardiopathy, 12 %; valvulopathy, 8 %; and cardiac insufficiency (CI), 6 %. 12 % were under antiarrhythmic treatment. The main presentation symptoms were: palpitations: 56 %; thoracic pain: 30 %; syncope: 7 %; and CI: 6 %. The evolution time of symptoms, until assistance was requested, was: <24 hr for 71 % of the patients, between 24-48 hr for 17 % and >48 hr for 12 %. 2 % of the patients returned to sinus rhythm spontaneously. The drugs administered in the ED were Amiodarone (56 %) and others drugs in the rest of patients. 72 % returned to sinus rhythm. The reversion was quicker with Flecainide with 4 hours. 85 % of those under 65 returned to sinus rhythm, and only 64 % in those older without sexual differences. The delay in requesting assistance had a negative influence on the reversion. Only 50 % of those who began with cardiac insufficiency reverted. 100% of those treated with Flecainide returned to sinus rhythm, 71 % with Amiodarone, with Amiodarone + Digoxine 72 %, and with Digoxine 33 %. 77 % of the patients with a PH of previous episodes of AF returned to sinus rhythm, against 61 % of those who did not. In the rest of the PH, there was no significant difference. Conclusions: A young patient, without structural cardiopathy, who does not delay in requesting assistance, with previous episodes of AF, and who is administered CI antiarrhythmic drugs, has more probability of recovery than another patient of advanced age, structural cardiopathy, prolonged time of evolution of AF and haemodynamic instability.

IMPLEMENTATION OF THROMBOLYTIC THERAPY IN THE EMERGENCY DEPARTMENT

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Introduction: Thrombolytic therapy is associated with survival advantage in patients with myocardial infarction (MI), especially if it's available during first hours onset of symptoms. In our hospital this therapy is administered in emergency department. Objectives: Our purpose was know the management of thrombolytic therapy in patients with primary discharge diagnosis of MI who were admitted with clinical and ECG indications for this therapy and no absolute contraindications, and to evaluate the adequacy our delays to recommendation objectives. Methods: This observational study included all patients with MI and ST-segment elevation sampling period 12-months 2002. We excluded patients with absolute contraindications and primary angioplasty indication. We divided patients into 2 subgroups: PRIORITY I: 30 minutes(min.) of onset symtoms, ST-segment elevation in>2 contiguous leads, normal blood pressure, no absolute contraindications; PRIORITY II: atypical symtoms, 6 hours of onset of symptoms, elderly patients, relative contraindications for therapy, systolic blood pressure of<90mmHg on arrival. We study demographic characteristics (age and sex) and time management: time from onset of symptoms to hospital admission, from hospital admission to ECG and thrombolytic, and from ECG to thrombolytic therapy. Results: 38 patients with MI and ST-segment elevation were included and received thrombolytic therapy. Middle age: 59 (40-82); 71% men; 66% patients were subgroup PRIORITY I (25) and 34% PRIORITY II (13). Times from: onset symptoms to hospital admission 120min.(20-4320), hospital admission to ECG 4 min. (0-34), hospital admission to therapy 32 min. (6-144), ECG to therapy 30 min. (5-133). 68% of patients the time from hospital admission to ECG >10min, 84% of PRIORITY subgroup was administrated therapy before 30 min. and 38% PRIORITY II before 45 min. Conclusions: In-hospital delay in therapy is acceptable but remains long. Periodic revision delays evaluate if this delay could be shortened and improve the treatment of these patients.

EFFICACY AND SAFETY OF AN EMERGENCY DEPARTMENT SHORT-STAY UNIT IN THE TREATMENT OF PATIENTS WITH ACUTE CORONARY SYNDROME

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Acute coronary syndrome (ACS) is a frequent diagnosis seen in the Emergency Department (ED). Most of these patients require only pharmacological therapy to be clinically stabilized. An ED Short-Stay Unit (EDSSU) is an alternative to in-patient hospitalization for acute care. Objectives. To describe the demographic and clinical characteristics, and to evaluate the efficacy and safety of the management of the ACS patients admitted to the EDSSU. Methods: A retrospective analysis of the charts of the patients admitted to the EDSSU from Nov 11th 2002 to Mar 15th 2003 diagnosed as having ACS was made by two ED physicians. The efficacy and safety were evaluated by means of the treatment give, the mortality rate, the unscheduled ED returns and the hospital readmission rate within 10 days of home discharge from the unit. Results: We analyzed 31 ACS episodes in 29 patients admitted to the EDSSU with ACS as a first diagnosis. Nine (32%) of them were men and 20 (69%) were women. Median age was 83.6 years (range 59-96) and the mean length of stay was 3.5 days (range 0.5-5). Electrocadiography findings were ST segment elevation in 6 episodes (19%); ischaemia signs without ST segment elevation in 17 episodes (55%); normal ECG in 2 episodes (7%) and 6 (19%) indeterminate. Biochemical markers were positive (troponin I < 0.2ug/L) in 22 episodes (70.9%). Non-Q-wave myocardial infarction (troponin I > 2ug/L) was diagnosed in 8 episodes. All episodes were treated with intravenous nitrates; 83% (26/31) with antiplatelet therapy; 61% (19/31) with low-molecular weight heparin and one episode with thombolysis (streptokinase). ACS patients were transferred to a conventional unit in 6 episodes. Ten days after EDSSU discharge, four patients (4/29) were readmitted in the hospital. No patient died. Conclusions: The EDSSU is an effective and safe alternative to in-hospital management for patients presenting to the ED with an ACS and not requiring any immediate invasive therapy.

ASSESSMENT OF THE EFFICACY AND SAFETY OF GUT DECONTAMINATION IN PATIENTS WITH ACUTE THERAPEUTIC DRUG OVERDOSE.

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Introduction: Gut decontamination forms part of the spectrum of treatments for acute therapeutic drug overdose (ATDO), with various options being available (syrup of ipecac, gastric lavage, activated charcoal, cathartic agents) whose use depends on the type of drug ingested, the time since ingestion and the clinical condition of the patient. Objective: To assess the efficacy and safety of gut decontamination procedures used in our hospital for patients with ATDO. Methods: A 4-month prospective observational study was made of patients admitted to the Emergency Department with an ATDO. On arrival, epidemiological data (sex, age, drug type, dose, time from ingestion), clinical parameters (blood pressure, heartbeat, breathing rate, axillary temperature), and the physical exploration (especially the Glasgow Coma Score) were registered and the plasma levels of the drug ingested were determined. Gut decontamination was used or not, according to a decision-making algorithm used in our hospital to determine the most-appropriate method of decontamination. After 3 and 6 hours, the clinical condition of the patient was re-evaluated and new tests made. The patient was followed until hospital discharge, with the clinical evolution and the possible appearance of adverse events due to the decontamination being noted. The results were analysed using the SPSS 10.0 statistical program. Results: Ninety-four patients were included: 60% were female, and the average age was 41 years. Digestive decontamination was indicated in 60 patients (63.8%), of which 3% were given syrup of ipecac, 8% underwent gastric lavage, 71% received only oral activated charcoal and 21% underwent gastric lavage followed by activated charcoal. Clinical deterioration was observed in 19%, usually reduced levels

of consciousness. A toxicological analysis was carried out in 50 cases, with drug concentrations at 3 or 6 hours after admission having risen in 42% of cases. Adverse effects to the method of decontamination were recorded in 5% of patients. In 70 patients (74%), the algorithm was followed (group A), while in the other 24, treatment other than that indicated by the algorithm was given (group B). Clinical deterioration was observed in 14% of patients in group A and 33% in group B (p=0.041). An unfavourable evolution of the analytic curve occurred in 39% of patients in group A and in 66% in group B (p=0.105). Sever adverse effects due to decontamination occurred in 2% of patients in group A and 11% in group B (p=0.171). The evolution was favourable in all aspects (clinical+tests+absence of adverse events) in 51% of patients in group A and 13% in group B (p=0.011). Conclusions: The efficacy and safety of gut decontamination in patients with ATDO are greater in patients where the decision-making algorithm used in our hospital is applied, although its application does not prevent clinical deterioration, increased absorption of the drug or the appearance of adverse events in all cases.

BLUNT ABDOMINAL TRAUMA WITH PANCREATIC LACERATION

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Case report: An 18-year old man came to our emergency department because of left abdominal pain that had started 5 hours before, with sickness and vomiting. He suffered a left inferior thoracic contusion before the onset of the symptoms. On arrival he was sweating, with pallor and in pain. The BP was 160/100 mmHg and the pulse rate 100. On physical examination the pain and defense to the abdominal diffuse palpation was present. The blood test showed a CPK level elevation (669 U/L) and the amylasemia was 156 U/L. The EKG, the chest and the abdominal radiography were unremarkable. The abdominal ultrasonography showed no peritoneal fluid, nor spleen rupture. The amylasemia increased to 499 U/L, so an abdominal computer tomography (CT) was performed, which showed a tail of the pancreas laceration with mesenteric hematoma. The abdominal pain restarted with rebound tenderness and the second abdominal CT showed pancreatic tail rupture, separated from the pancreatic body. Urgent surgery was performed. Discussion: Blunt or penetrating external forces cause the abdominal trauma (AT). The most frequent affected viscera are the massive ones as the spleen (50%) and the liver (25%), but the trauma to the pancreas (TP) is uncommon (4%). The symptoms of TP are abdominal pain, tenderness and rebound tenderness and shock. The blood examination shows an elevated level of the amylase test, which sometimes increases in some hours. The most accurate diagnostic test is the CT scan. The pancreatic isthmus is the most frequent affected part, and the affectation of the head and the tail is rare. In our case the injury was in his pancreatic tail compromising the Wirsung conduct. Conclusions: An early diagnostic of TP is essential. It is important to evaluate the possible pancreatic involvement in an AT, to perform blood and urine amylase test. If suspicions are high, the CT will confirm the diagnostic in order to perform, as soon as possible, the correct surgical treatment.

FOREIGN BODY ASPIRATION MIMICKING EXACERBATION OF CHRONIC OBSTRUCTIVE LUNG DISEASE

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Case report: A 77-year old man, with a history of tabaquism until few years ago, affected with chronic obstructive lung disease and left lower lobectomy because of a lung cancer, had been visiting our emergency department for one month. He complained of cough, occasional hemoptysis, dyspnea and wheezing. Auscultation over the chest always confirmed the wheezing and other pulmonary sounds, and an inspiratory stridor was present. Neither the blood test nor the chest radiography was different from a stable condition. Bronchodilators, corticosteroids and antibiotics were prescribed without improvement, so a flexible fiberoptic bronchoscopy was performed one month later. A foreign body was found between the left superior and inferior bronchus and the patient successfully recovered after the foreign body removal. After that, the patient remembered a history of choking just before the onset of the symptoms. Discussion: The swallowing reflex protects human subjects from body aspiration into the airway in normal adults. When this mechanism could not operate normally or when the foreign body bypasses this reflex in the oropharynx, it would be easily aspirated. Possible mechanism in patients underlying pulmonary disease and poor pulmonary function reserve may be due to the need of rapid respiration leading to discordance between the swallowing centre and respiratory centre. We do not usually suspect foreign body aspiration in adults, but the history of choking is clear. The patients are often misdiagnosed and the correct treatment is delayed. However, the majority of the foreign bodies, when inhaled, are in the lower respiratory tract, so the symptoms are less severe than those localized in the trachea or larynx. Conclusions: Although rare, tracheobroncheal foreign body aspiration in adults can occur in various clinical settings. High clinical suspicion is necessary for diagnosis.

CHRONIC OBSTRUCTIVE LUNG DISEASE (COPD) (I): ETIOLOGY OF THE EXACERBATIONS, CORRELATION BETWEEN THE ADMISSION DIAGNOSIS, DISCHARGE, AND COMORBIDITY

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Objectives: The purpose of this study was to analyse the etiology of the exacerbations of the patients with COPD that visited the emergency department, to find out the correlation between the emergency department etiological diagnostic and internal medicine, to determine the comorbidity, and to estimate the number of those who were admitted to the hospital. Methods: Descriptive and retrospective analysis of 100 consecutive patients with COPD who visited our emergency department for exacerbation. This is characterized by increased dyspnea, increases in sputum production, purulence of sputum or any combination of these three symptoms. Clinical history review and filling-in of a questionnaire. Statistical analysis with the G-Stat

1.1 program. Results: Three cases were excluded because of filling-in errors. The acute infection of the intrapulmonary airways was the most frequent etiology of the exacerbation (57.65% acute bronchitis and 11.76% pneumonia). Heart failure was identified in 10 patients, pulmonary embolism in one and lung cancer in another. More than a half of the patients visited (51.06%) were admitted to the hospital and in 80.49% cases the emergency department and internal medicine diagnostics were the same. The most frequent comorbidity found was hypertension (42.27%), diabetes mellitus (30.93%), tabaquism (40.21%), ischemic cardiopathy (21.74%) and heart failure (20.6%). 5.75% were admitted to the hospital 4 or 5 times since last year. That was the first visit for 37.93%, but 34.48% had been admitted 2 or 3 times previously. Conclusions: The most common cause of COPD exacerbation is the infection and heart failure. Almost half of the patients are discharged from the emergency department once visited. There is a high concordance among the diagnostic on admission and on discharge. Hypertension is the most frequent comorbidity found. There has been at least one previous hospital admission among the majority of the patients we visited.

CHRONIC OBSTRUCTIVE LUNG DISEASE (COPD) (II): VARIABILITY OF THE TREATMENT, ANTIBIOTIC USE AND QUALITY OF THE SERVICE

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Objectives: The purpose of this study was to analyse the variability of the treatment for the exacerbations in patients with COPD that visited the emergency department, to find out the use of antibiotics, and to determine the quality of the service received. Patients And Method: Descriptive and retrospective analysis of 100 consecutive patients with COPD visited our emergency department for an exacerbation. This is characterized by increased dyspnea, increases in sputum production, purulence of sputum or any combination of these three symptoms. Clinical history review and filling-in of a questionnaire. Statistical analysis with the G-Stat 1.1 program. Results: Three cases were excluded for filling in errors. The most common treatment was oral corticosteroids (56.97%), inhaled anticholinergic (60.24%) and short-acting beta-2 agonists (55.68%). Inhaled corticosteroids were recommended 29 times (35.37%) and antibiotics 75. Amoxicilin-clavulanic and levofloxacin (27.96% for each) were the most common antibiotics prescribed. 32% were taking some antibiotic when they visited, but 75.25% were discharged with them. 35 of 42 patients discharged (83.33%) received antimicrobial therapy and 28 of 46 admitted (60.87%). The most common antibiotic recommended for the three levels of service were amoxicilin-clavulanic in primary care (34.38%) and emergency (33.33%) and levofloxacin in hospitalization (26.09%). Only 1 patient of 9 attended (10.53%) returned to our department 7 days after discharge. Conclusions: Salbutamol, ipratropium bromide, oral corticosteroids and amoxicilin-clavulanic or levofloxacin are the most commonly prescribed drugs. Most of the patients with exacerbations of the COPD received antibiotic therapy. An increasing number of levofloxacin over betalactamics is used as the complexity of the demand rises. The quality of the service received is high, as only a few of them came again once discharged.

GERIATRICS IN AN EMERGENCY DEPARTMENT. AN ATTENDANCE IMPROVEMENT

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The geriatric function unit (GFU) is a multidisciplinary team that values geriatric patients admitted at an acute hospital. The GFU support in an emergency department (ED) may avoid inappropriate admissions and ameliorate the ED coordination with other assistance levels, which results in an improvement in care quality. AIMS. To describe the GFU activity in an emergency department in a general hospital and to analyze its correct use. Methods: Descriptive retrospective study of the GFU activity in the year 2002. Specialty, professional that consults, patients' characteristics, resource need and appropriateness of consultation were analyzed. Results: 100 patients were evaluated, with a mean age of 80.9 years. Prior to admission, mean Barthel index was 59.68 and 39% of patients had cognitive impairment. When patients were assessed, mean Barthel index was 23.88 and 58.89% of them had cognitive impairment. 78% of the demand was from the medical area, 17% from traumatology and 5% from surgery. The physician was the consultant in 61% of cases, social worker in 24%, nurses in 5% and others in 10%.The necessary resource that the GFU requested was : 49% intermediate care, 7% home attention, 7% palliative care, 3% long term care and 4% other resources. 9% of patients were valued as home discharge and 21% were addressed to social services as they had not any sanitary needs. In 12% of the sample, sanitary needs were undervalued and social worker was demanded in the first place. In 25% of direct consultations to GFU and in 30% of the whole sample, the GFU intervention was not necessary. 70% of admissions in correctly consulted patients were avoided. Conclusions: Consulted patients are elderly, with an acute functional loss and with cognitive impairment. The medical area and the physicians are the most involved. In a high percentage of cases social and sanitary needs are mistaken. The GFU activity avoids inappropriate admissions.

VALORACIÓN DE CIFRAS INTERMEDIAS DE TROPONINA EN UN SERVICIO DE URGENCIAS

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Introducción: Una de las herramientas que se utiliza en el diagnóstico de Síndrome Coronario Agudo (S.C.A.), es la determinación de marcadores cardiacos y más concretamente la determinación de Troponina (TRP). La utilizada en nuestro hospital es la TRP-I, cuyo rango de normalidad es hasta 0,04 ng/ml, y a partir de 0,5 ng/ml es diagnóstico de infarto agudo de miocardio (I.A.M.). Por ello con frecuencia resulta difícil dar una orientación tanto diagnóstica como terapeútica a un paciente con sospecha de S.C.A. y valores de TRP-I entre 0,04 ng/ml y 0,5 ng/ml. Objetivos: 1) Conocer el diagnóstico al alta de los pacientes con sospecha de S.C.A. y valores de TRP-I entre 0,04 ng/ml y 0,5 ng/ml. 2) Analizar la existencia

de eventos cardiacos durante el ingreso hospitalario de los pacientes con sospecha de S.C.A. y valores de TRP-I entre 0.04 ng/ml y 0.5 ng/ml. Metodología: Estudio observacional retrospectivo seleccionando a todos los pacientes con sospecha de S.C.A. y TRP-I con valores entre 0,04 ng/ml y 0,5 ng/ml. en el servicio de urgencias, registrando el diagnóstico al alta, así como la aparición de eventos cardiacos durante la ingreso. La recogida de datos se realizó en el periodo comprendido entre el 1 de enero al 31 de mayo del 2002. Durante este año se ha realizado una 2ª revisión entre los meses de enero a abril para confirmar los resultados obtenidos el año pasado. Resultados: Durante el periodo comprendido entre el 1-1-02 a 31-5-02 se atendieron en el Servicio de Urgencias 125 pacientes con sospecha se S.C.A. y cifras de TRP-I entre 0,04 ng/ml y 0,5 ng/ml. De todos ellos el diagnóstico al alta hospitalaria fue de patología cardiaca en 83 (66,4%), confirmándose el diagnóstico enfermedad coronaria en 49 (39,2%), de éstos 21 (16,8%) I.A.M. y 28 (22,4%) angina inestable, y en 34 pacientes (27,2%) el diagnóstico fue de insuficiencia cardiaca exclusivamente. En 13 pacientes (10,4%) el diagnóstico al alta fue de infección respiratoria más insuficiencia cardíaca, y en 29 pacientes (23,2%) el diagnóstico era no cardiáco. De los 125 pacientes presentaron complicación cardiaca durante el ingreso exclusivanente aquellos cuyo diagnóstico al alta era enfermedad cardiaca. Ocurrió evento cardiaco en 29 pacientes (23,2%). En 9 pacientes (7,2%) desarrollaron un fallo cardiaco que acabó en muerte, 5 pacientes (4%) desarrollaron complicación isquémica y 15 pacientes (12%) presentaron taquiarritmia. Conclusiones: La aparición de cifras de TRP-I en valores entre 0,04 ng/ml y 0,5 ng/ml confirman el diagnóstico de enfermedad cardiaca en más de la mitad de los pacientes. Es preciso no infravalorar este rango analítico de TRP-I, pués casi hasta un 25% de pacientes van a desarrollar una complicación cardiaca, que incluso puede terminar en exitus.

IMMIGRATION IMPACT AT AN URBAN SPANISH EMERGENCY DEPARTMENT: A FREQUENTATION ANALYSIS

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Objective: Immigration is a new reality in our healthcare system with special needs and problems, which should be addressed. We tried to make a quantitative approach to the reality of this circumstance in our setting. Method: We identified all non-Spanish population that visited our emergency department for a period of 30 days. Information about race, country, communication problems, presence of an escort and previous contact with the healthcare system was gathered. Results: 13.505 patients were seen during the study period with 336 non-Spanish (2,5%). Origin was: 32% Magreb, 19% other parts of Africa, 25% Latin-Americans, 2% Orientals and 10% from the rest of Europe. The most frequent countries were: Marocq (93), Colombia (39), Equatorial Guinea (34), Ecuador (25) and Nigeria (23). Difficulties in communication were present in 30% (71% women). The grade of difficulty was important, mild or minor in 48%, 28% and 24% respectively. Orientals had the greatest difficulties (50%). Were accompanied by someone fluent in Spanish 62%. Women (28%) had more difficulties than men (22%). Only 15% had visited the primary care clinic prior to consultation in the emergency department. Finally, 80% had either a provisional document (17%) or the standard insurance card (63%) for the public healthcare system. The medical service was Internal medicine 38%, COT 21.5%, Surgery 4.7% Gynaecology 27% Paediatrics 19% Ophthalmology 2% and Urology 0.8%. Only the 10.6% was admitted to the hospital, most of them in Obstetrics (81.5%). Finally, 69% of the patients were sent to another medical service, primary care (66.3%) and consult of specialist medicine (22.28%). Conclusions: 1- Burden of non-Spanish patients is significant in our environment (336 in one month equivalent to 4.032 yearly; 2,6%) and constantly growing. 2- The number of patients with formal contact with the system is reduced, a negative factor to follow up. 3- Just five countries account for 63% of attended patients, suggesting a colony type of establishing pattern. 4- It is worth pointing that Obstetrics was the leader in patients admission, corroborating that immigrant community currently has a very important place in the birth rate in this country. 5-In urban areas like ours the challenge of caring for this type of patients should prompt new means of approaching the problem.

REASONS OF THE IMMIGRANT POPULATION TO REQUEST THE ELCHE HOSPITAL URGENCY SERVICES

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Background: The immigrant population patients do not have a well known epidemiology and pathology of illness. Objective: The aim of this project was to determine the features of the consultations requested by immigrant patients. Methods: This is a retrospective, descriptive study of immigrants treated in February 2002. We reviewed the medical histories and performed statistic analysis with SPSS for Windows. Results: Internal medicine consultations were the most prevailing urgent medical services requested. Rheumatic problems were the most common reason for consultation. 53% of the patients required complementary medical test and 8% required their admission in the hospital.

SOCIAL DEMOGRAPHIC FEATURES OF THE IMMIGRANT POPULATION REQUESTING THE URGENCY SERVICES OF A SECONDARY HOSPITAL

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Background: Increases in immigration have led to a greater demand for medical attention. On many occasions, presentation for urgency services is the first access to the sanitary system that immigrants have. Objective: The aim of this work is to describe the profile of the immigrant population requesting care at our urgency services hospital. Methods: This is a retrospective, descriptive study performed by chart review of all immigrants who accessed the urgency services hospital in February 2002. Results: The prevailing countries of origin in the immigrant population were Morocco, Ecuador and Colombia. The population was young (15-30 years old) and predominantly female. The affiliation to the Social Security was directly related to the average stay.

HERIDA CARDÍACA POR ARMA BLANCA: TORACOTOMÍA EXTRAHOSPITALARIA

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Introducción: La introducción de técnicas agresivas en la Emergencia extrahospitalaria permite ofrecer a los pacientes la última oportunidad de salvar su vida, estas técnicas agresivas que siempre han sido patrimonio del hospital, se pueden realizar fuera de él, su introducción permitirá la demostración en el futuro de esos resultados positivos. Objetivo: Demostrar que la toracotomia de urgencias se puede realizar en la Emergencia extrahospitalaria, como única alternativa en pacientes con PCR por afectación cardiaca penetrante. Caso clínico · Varón de 59 años. · Cinco heridas penetrantes en tórax. · Situación de PCR. · Inician maniobras de RCP según procedimientos confirmando que al menos una de ellas tiene afectación cardiaca. · Se exploran las heridas del tórax manualmente, confirmando que al menos una de ellas tiene afectación cardiaca. · Se valora conjuntamente entre los facultativos la realización de toracotomia. Decidiendo ante la situación del paciente(PCR que no revierte con maniobras habituales) realización de la misma. · Se inicia apertura de tórax a los 6 - 7 minutos de iniciadas las maniobras de reanimación. · Durante la realización de la técnica de toracotomía para evacuación del taponamiento cardiaco y sutura de la probable herida cardiaca, se realiza por parte de uno de los autores un video de toda la actuación. Realizada la toracotomía, se confirma que hay una herida cardiaca de grandes dimensiones, que se intenta suturar, obteniéndose una sutura precaria de la aurícula y ventrículo derecho por falta de medios, así mismo el paciente fallece a consecuencia de otras heridas torácicas que fueron imposible controlar. Se presentará la grabación de dicha técnica mediante video. Conclusiones La Toracotomia como técnica de aplicación en la Emergencia extrahospitalaria, es una técnica de fácil aplicación precisando un entrenamiento previo no demasiado amplio y es la última oportunidad que se le puede ofertar a un paciente que presenta una PCR por herida penetrante en tórax con afectación cardiaca. Si es fundamental contar con material adecuado y personal que sepa moverse dentro de un campo quirúrgico.

CLINICAL VALUE OF BRAIN NATRIURETIC PEPTIDE DETERMINATION IN EMERGENCY DEPARTMENT

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Background: Brain Natriuretic Peptide (BNP) is secreted as a prohormone (proBNP) from the left ventricle in response to an increase in ventricular pressure. It can be measured in blood or plasma as BNP or NT-proBNP (the N-terminal fraction of the prohormone) using ECLIA (electrochemical luminiscent method) Aim: To establish the clinical value of NT-proBNP detection in the diagnosis of Cardiac Insufficiency (CI) in an Emergency Department (ED). To determine the intrinsic value (sensitivity and specificity) and the predictive value (positive and negative) of the test. Methods: Descriptive analysis. Thirty patients who came to the ED because of dyspnea III-IV of NYHA. NT-proBNP was measured by ECLIA (Elecsys, Roche) before any treatment was given in the ED. Diagnostic criteria: Framingham criteria for CI and usual spirometic criteria for chronic obstructive pulmonary disease (COPD). After performing the usual test in the ED, patients were classified as follows: Group 1:COPD without CI; Group 2: Right ventricular insufficiency due to COPD and Group 3: Left ventricular insufficiency. Statistical analysis was performed using SPSS 10.0. NT-proBNP levels are presented as median and percentiles (25th ; 75th). To compare NT-proBNP levels in group 3 (CI) vs. Groups without CI we used the Mann-Whitney U test. ROC analysis for diagnosis of CI. Results: Mean age: 68.4 years (standard deviation 11.8). CI was diagnosed in 16 patients (53.3%). NT-proBNP median and 25th; 75th percentiles values were: Group 1: 443(110; 843) pg/ml; Group 2:740 (374; 807) pg/ml, and group 3: 2641 (2290; 3842) pg/ml, in two of them the diagnosis of CI was not initially established in the ED (Kappa: 0.88). The values of NT-proBNP were higher in patients with CI (2641; 2290/3842 pg/ml) vs. without CI (596; 149/772 pg/ml.) ($p<0.01$). The area under the ROC curve for CI was 0.96 (95 % CI: 0.89 to 1). No patient with CI showed levels of NT-proBNP above 300 pg/ml. (NPV 100%). A NT-proBNP cutoff value of 1500 pg/ml, showed sensitivity of 94%, specificity of 93%, PPV= 94% and NPV= 93%. Conclusions: 1. Making a diagnosis of Cardiac Insufficiency is sometimes difficult in the Emergency Department. 2. The high negative predictive value of NT-proBNP test makes it possible to exclude cardiac insufficiency as cause of dyspnea. 3. Higher levels of NT-proBNP may help diagnosing a non-suspected cardiac insufficiency.

EL SERVICIO DE URGENCIAS MAXIMO PROVEEDOR DE LA HOSPITALIZACION DOMICILIARIA EN EL HOSPITAL DE MATARÓ: UNA REALIDAD

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Introduccion: El Hospital de Mataró tiene una área de influencia de 230.000 habitantes, dispone en época de máxima ocupación de 330 camas de hospitalización y en el año 2002 se atendieron 109.000 urgencias. A finales del 1998 se creó la Unidad de Hospitalización Domiciliaria (UHD), que inicialmente se orientó al paciente hospitalizado, cuyo proceso agudo está en fase de estabilización pero que requiere todavía medidas asistenciales hospitalarias. Por iniciativa del Servicio de Urgencias (SU), se creo una comisión para estudiar la viabilidad y establecer un protocolo que permitiera ingreso directamente desde SU a UHD. Objetivo: Valorar la evolución en la utilización de la UHD por parte de SU en relación al resto de servicios hospitalarios. Metodologia: Estudio descriptivo de los pacientes ingresados en UHD desde el año 1999 hasta el 2002, analizando por periodos anuales la procedencia al ingreso en UHD del SU y del resto de servicios hospitalarios, analizando además variables socio-demograficas y los grupos de patología prevalentes. RESULTADOS: En el año 1999 se ingresaron en la UHD 10 pacientes procedentes de SU (5% del total) y 184 (95%) de las Unidades de Hospitalización Convencional (UHC). El balance hasta la actualidad es progresivamente favorable al SU, registrándose en el año 2002 un total de 81 ingresos (49% del total) procedentes de UHC y 84 ingresos (51%) procedentes directamente del SU. La edad media de los pacientes procedentes del SU en el año 1999 es de 76,3 años con un rango de 66 a 90 y proporción hombre/mujer de 4/1. En el año

2001 la edad media es de 60,9 años con un rango de 16 a 99 y proporción hombre/mujer = 1. Por grupos de patología mientras que en el año 1999 desde SU ingresaron básicamente pacientes respiratorios crónicos reagudizados (9 de los 10 casos), en el año 2002 ingresaron 84 pacientes con los siguientes grupos de patología: 35 reagudizaciones de EPOC, 2 TBC pulmonar, 40 infecciones febriles de vía urinaria, 7 trombosis venosas profundas, 3 insuficiencia cardíaca y 1 fractura de pelvis. Conclusiones: ? A pesar de la finalidad inicial de la UHD, el SU ha aumentado progresivamente el número de ingresos en esta Unidad, resultando ser actualmente el principal proveedor de los ingresos domiciliarios. ? El SU integra rápidamente cualquier alternativa que de solución a sus problemas endémicos, como la falta de camas de ingreso hospitalario convencional. Es objetivo prioritario del SU, potenciar y colaborar con la gestión integral del problema de camas hospitalarias. ? Desde los SU debemos seguir buscando y colaborando en nuevas alternativas al ingreso hospitalario convencional: UHD, Hospital de día, utilización de camas de Residencias Geriátricas asistidas en periodos invernales coordinadas con hospitales de agudos y sus SU, acceso a la gestión de visitas preferentes (48-72h) en Dispensarios de Especialistas Hospitalarios, coordinación y colaboración eficaz con los Centros Atención Primaria.

VALORATION OF THE QUALITY OF THE CLINIC HISTORY IN OSAKIDETZA EMERGENCIES

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The Clinic History (CH) and the physical examination are the main diagnosis tools in the pre-hospital emergency medicine; the lack of the usual technical resources in other settings makes our labour be carried out on the basis of these two points. Objective: To value the quality of the HC made in Emergentziak Osakidetza during a period of 1 year. Methodology: A retrospective analysis of the CH was made in a period between the 1st of January and the 31st of December of 2002. Out of 13033 calls, it was carried out a research in order to fix the samples size, which was of 338 histories. The revision was made in a random way choosing one among 35 CH, the number of the HC to review by territory was allocated proportional to the number of the total consultations. The CH were sorted into non-traumatic and traumatic attendance. The items valued were: number of action, identification of the medical team and of the patient, motive of consultation, personal record, present illness, vital signs, diagnosis, treatment and transference; in the traumatic attendance, it was valued the location of the accident itself, the primary and secondary assessment along with the evolution of the patient . Each item was valued in a positive way if it had been carried out correctly and if it was understandable; negative, if it was not carried out at all or in a wrong way, or not applicable in the other cases. Afterwards, these results were corrected according to a scale that was carried out by the Clinic Documentation Unit of the Cruces Hospital, and adapted to our setting by a work group of Osakidetza Emergencies. A level equal or higher than 80% was considered as a limit of acceptable quality. Results: The distribution of the calls by regions was the following: Bizkaia 5606 (43%), Gipuzkoa 5187 (39.8%), Araba 2240 (17.2%). From the obtained sample (338 CH), 78% were calls of non-traumatic whereas 22% were of traumatic nature. With regard to the whole of the non-traumatic attendances, all the items combined quality criteria, all except two of them: (Number of action 61% and taking of vital signs 74%). In the traumatic CH there was a lesser quality, noticing 5 items without criterion of quality (Number of action 59%, treatment 26%, evolution 73%, diagnosis 68% and transference 69%) standing out the fulfillment of items such as the primary (94%) and secondary (97%) assessment. Conclusion: 1. The regions if Bizkaia and Gipuzkoa have more than the 80% of the attendance, and most of these calls are of medical nature (78%). 2. Although the quality of this medical attendance is very high, in the traumatic CH there was a lesser quality, with 5 items that did meet the criteria of quality, perhaps due to a more difficult history model that had to be carried out. 3. It could be necessary a change of the model of the traumatic CH in order to ease its correct fulfillment.

DE LA PATERA AL HOSPITAL: LA NUEVA URGENCIA

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Introducción: La proximidad de la isla de Fuerteventura a la costa africana y el aumento de los inmigrantes que llegan a la misma en patera en busca de una vida mejor, está ocasionando una nueva demanda asistencial en los servicios de urgencia, hasta ahora desconocida. Aunque en la mayoría de los casos no constituye una verdadera urgencia médica, sí supone una urgencia social que por desconocimiento en su manejo provoca saturación de los servicios y un mal uso de los recursos disponibles. Con todo hemos querido dar una visión global del paso de los inmigrantes por el servicio de urgencias del único hospital de la isla. Objetivos: Describir el perfil del inmigrante que atendemos en el servicio de urgencias del Hospital General de Fuerteventura, conocer los motivos de consulta y nivel de prioridad de atención, además de medir los tiempos de estancia en el servicio y sus destinos al alta. Material y método: Es un estudio retrospectivo y longitudinal, en el que analizamos de forma descriptiva una muestra de los inmigrantes atendidos en nuestro servicio tras llegar a la isla en patera. Dicha muestra incluye 100 inmigrantes, de un total de 432 atendidos en el servicio entre el 15 de septiembre del 2001 y el 15 de septiembre del 2002. La recogida de datos incluía la revisión de los registros de enfermería de urgencias y otros datos obtenidos en los servicios de control de gestión y de admisión del hospital. Resultados: De los 30.832 pacientes atendidos en urgencias en el periodo de estudio, 432 eran inmigrantes, lo que supone el 1.4% de las urgencias atendidas. De los 100 casos estudiados resultaron 68 varones y 32 hembras, con una media de edad de 25,4 años. La procedencia era en un 68% sudsahariana y un 32% magrebí. Entre los motivos de consulta destacaban el malestar general (36%) y el dolor abdominal (32%) y en menor medida los traumatismos (10%), fiebres sin foco (5%), cefaleas (4%) y disnea (2%). Además el 12% eran gestantes mal controladas. De ellos se consideraron 30 urgencias agudas y 3 agudos inestables, mientras el resto fueron no agudos-demorables. En cuanto a los tiempos de estancia en el servicio el 37% estuvo de 1 a 4 horas y otro 20% menos de 45 minutos. 83 fueron dados de alta antes de 24 horas y 15 ingresados en planta. Conclusiones: El perfil del inmigrante africano de patera es de un individuo varón, de raza negra, entre 19-27 años y de procedencia sudsahariana. Las malas condiciones del viaje desde la costa africana hasta la isla suponen un gran desgaste físico y psíquico

para el inmigrante. El principal motivo de consulta fue el malestar general, entendiendo como tal a debilidad, frío, náuseas, vómitos, palpitaciones... Del total de la población de estudio, tan sólo tres precisaron de una asistencia inmediata por clasificarse como agudo inestable, mientras que el resto fueron urgencias demorables. Llama la atención el número de mujeres embarazadas que se embarcan en esta aventura pese al riesgo, dos de las cuales dieron a luz en las primeras 24 horas. El promedio de estancia en el servicio oscila entre 1-4 horas, siendo el destino más habitual el alta domiciliaria. Palabras clave: Fuerteventura, isla, urgencias, inmigrante africano y patera.

EL INMIGRANTE AFRICANO EN EL SERVICO DE URGENCIAS: CUIDADOS DE ENFERMERÍA

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La llegada de pateras y el flujo continuo de inmigrantes africanos a las costas canarias, ha ido en aumento. Debido a las condiciones en que realizan el viaje es fácil pensar que son una población susceptible de múltiples intervenciones de enfermería en el momento de su llegada al servicio de urgencias. Objetivos: Determinar las actuaciones de enfermería ante el inmigrante africano en el servicio de urgencias y enumerar las necesidades básicas alteradas de estos pacientes. Material y método: El estudio realizado con carácter retrospectivo y observacional, tomó como población de estudio una muestra aleatoria de 100 inmigrantes de los 432 atendidos en el servicio de urgencias desde el 15 de septiembre de 2001 al 15 de septiembre de 2002. La recogida de datos se llevó a cabo mediante el registro de enfermería de urgencias. Entre las intervenciones de enfermería estudiadas diferenciamos: técnicas y cuidados básicos. No se incluyó como técnica de enfermería la medición de tensión arterial, frecuencia cardiaca, temperatura, frecuencia respiratoria y saturación de oxígeno por tratarse de parámetros que forman parte de la valoración inicial en la fase de clasificación. Resultados: Al 62 % de la muestra se le proporcionó alguna técnica de enfermería. En este apartado se incluyeron técnicas para la obtención de pruebas complementarias (extracciones de sangre, radiología, electrocardiogramas...) y/o resolución de problemas (sondas, curas, suturas, vendajes, administración de medicación...). El 38 % restante no precisó ninguna técnica de las descritas. De toda la muestra estudiada, el 100 % demandó cuidados básicos de enfermería. Estos cuidados básicos fueron proporcionados en función de las necesidades básicas alteradas. Las necesidades más frecuentemente alteradas fueron: comer y beber adecuadamente, dormir y descansar, vestirse y desvestirse, mantener la temperatura del cuerpo y mantener el cuerpo limpio. Conclusiones: Se evidenció una demanda de intervenciones enfermeras en las que existen mayor proporción de cuidados básicos que de técnicas. Esta demanda de cuidados viene condicionada por una serie de necesidades básicas alteradas como consecuencia de unas malas condiciones de viaje. Comparando la demanda de cuidados de enfermería que requiere la población habitual de nuestro servicio con la de los inmigrantes, se deduce que la necesidad es mayor en estos últimos. Las tareas de cuidado se reducen a proporcionar aseo, ropa seca, abrigo y saciar el hambre y la sed. El estudio nos ha permitido resaltar una vez más la importancia de los cuidados de enfermería como base de una atención integral y personalizada al individuo.

NONINVASIVE VENTILATION (NIV) AT THE EMERGENCY DEPARTMENT (ER) OF A UNIVERSITY HOSPITAL. TWO YEARS EXPERIENCE

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Objective and Methods: To describe our experience in the treatment of acute hypercapnic respiratory failure (AHRF) using NIV, over a two year period, between July/01 and June/03. A pressure ventilator "BIPAP QUANTUM" was used. We compared arterial blood gases before NIMV (C0), one hour after (C1) and 6 hours (C2) after the initiation of NIMV. Results: We have applied NIV to 70 patients, mean age 72.9. 34 patients were diagnosed of COPD, 16 did not have a previous diagnosis and 20 had other diseases related to AHRF. Bronchial infection was the most frequently identified etiology of AHRF (25). 17 cases had no identifiable cause. 67.9 % of the patients were ventilated by a full facial mask, with a spontaneous/controlled mode as the most common ventilation system used (73.8%). IPAP and EPAP mean values were 14.74 and 4.93 cms H2O respectively. Mean baseline patient characteristics before NIMV, were: Breath Rate (BR) 32.6, Heart Rate (HR) 109.10 and Glasgow Scale (G) 13 (median). Arterial Blood pH 7.24; PCO2 87.53 and PO2 41.43 mm Hg. There was a significant improvement in pH and PCO2 values comparing C0, C1 and C2 whereas BR, HR and G could not be analyzed due to scarce recording of these data. C1: pH 7.30, PCO2 74.93. C2: pH 7.34 and PCO2 66.38. 54 patients continued on NIMV after C1; it was discontinued in 16 patients (3 due to intolerance, 1 due to Intensive Care Unit criteria, 3 early corrections of respiratory acidosis and 9 failures of NIMV). 40 out of the 54 were still in the ER by C2; 28 continued on NIMV and it was discontinued due to correction of respiratory acidosis in 6 patients, 5 failures of NIMV and one due to intolerance. Overall NIMV was successful in 52 occasions (74.3%) and failed in 18 (25.7%). 15 (21.4%) patients died, but only 3 in the ER. 5 patients were admitted to Intensive Care Unit (3 patients needed orotracheal intubation). Conclusions: 1- NIMV in the ER was successful in 74.3% of the cases. Considering that we treated severe cases of AHRF, we believe that our results are quite positive. 2- We think that the use of NIMV should be a part of the ER approach to cases of AHRF and thus constant training of this technique should be encouraged.

DO REMINDER LETTERS INCREASE THE NUMBER OF INFORMED CONSENTS OBTAINED IN THE EMERGENCY DEPARTMENT?

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Objective: To evaluate the usefulness of a reminder letter sent to physicians in increasing the number of informed consents for blood transfusion obtained and appropriate specification in the medical orders in the Emergency Department (ED). Methods: After sending physicians a letter reminding them to obtain the informed consent for blood transfusion and

to fill medical orders, medical records of 84 consecutive patients who received blood transfusion in the medical area of our ED from December 1st of 1999 until March 28 of 2000 were reviewed. Data collected included age, sex, type of anaemia (acute or chronic), cause of anaemia, blood haemoglobin level, signs and symptoms after correcting volemia, risk factors, number of informed consents obtained, proper filling of medical orders and the number of units of blood given to each patient. Control group was a sample of 91 consecutive patients whose data was collected during the same period of the previous year. The results obtained were included in the letter sent to the physicians (residents and attending physicians) working at the ED. Patients data were compared using a t test with a significance criterion of $p < 0,05$. Results: Ninety-nine patients received blood transfusions during the study period. Fifteen (15%) were excluded of the analysis because their medical records were not available. Control and study group were similar in regards to age, sex and cause of anaemia. Thirty-nine patients (46%) in the study group and 25 (27%) in the control group signed the informed consent for transfusion. Thirty-six patients (43 %) in the study group and 51 (56%) in the control group did not sign the informed consent. Written informed consent form could not be found in 9 medical records (11%) in the study group and in 15 (16%) in the control group. All these variables were significantly different between groups ($p < 0.05$). Fifty-eight medical records (69%) of the study group and in 73 (80%) of the control group had appropriate specification for blood transfusion in the medical orders, 18 medical records (21%) in the study group and 10 (11%) in the control group did not have such specification. Medical orders forms were missing in 8 medical records (9%) in the study group and 8 (9%) in the study group. These data were not significantly different between groups ($p=0.09$). Conclusion: A remainder letter to ED physicians was effective to increase the number of written informed consents for transfusion obtained but did not improve the number of appropriate specification in the medical orders for blood transfusion.

MADE-TO-MEASURE REPERFUSION. DECISION TAKING FROM THE EMERGENCY SERVICE

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Background: Introduction of fibrinolytic drugs in acute myocardial infarction (AMI) treatment in the second half of the 80´s marked a notable change. At the beginning of 90´s the importance of the ratio time/benefit in treatment became evident. Many publications have recently shown the improved benefits of Primary ACTP in AMI with ST elevation as compared to fibrinolytic treatment. In order to reach a high level of use of Primary ACTP in our hospital, we have established a protocol to select which reperfusion therapy should be used in each of our patients with ACS with ST elevation. Objective: Inform other emergency departments about our Hospital protocol for patients with ACS with ST elevation and the preliminary results after 18 months of implementation. Methodology: Based on the best evidence and according to the consensus among our Emergency Service, ICU and Hemodynamics, a protocol based on clinical and electrocardiography findings was established. The choice of a particular treatment strategy is also dependent on the availability of a Hemodynamics Service. Protocol aim extension ekg with ST elevation elective therapy very extensive+cardiogenic shock 1.- V1-V6 y I-aVL 1.- Primary ACTP 2.- combined therapy 3.- Surgery (If Mechanical Defect) Extensive 1.- V1-V6 y I-aVL2.- II, III, aVF and Right Precordials orV5 and V6 1.- Primary ACTP and/or 2.- combined therapy 3.- t-PA moderated 1.-I, V1-V42.- II, III and aVF + Descended ST V1-V2 1.- t-PA small 1.- V5-V6 y/o I, aVL2.- II, III and aVF 1.- Estreptokinase or 2.- t-PA t-PA = rt-PA and TNK-tPA. combined therapy = rt-PA ½ dose (50mg) + Abciximab standard dose + heparin low dose results revascularization 2002 % 2002 2003 6 months 2003 % 6 months no 51 29.82 16 16.66 primary ACTP 10 5.88 18 18.75 fibrinolysis 100 58.47 49 51 combined therapy 10 5.88 13 13.54 global 171 96 Conclusions: Being conscious of the increased complexity in decision taking in ACS with ST elevation, we consider that an Emergency Service with our characteristics must assume this challenge in order to achieve a made-to-measure treatment for each patient needs, and so we include this protocol in our daily practice. Our preliminary results show an important increase of Primary ACTP and Combined Therapy. This increased complexity in decision taking shouldn't increase delay in fibrinolysis, but we're still waiting for this first results.

COORDINATION IN THE EMERGENCIES OF MARITIME INCIDENTS WITH VICTIMS

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Background: The sanitary maritime incidents happening in the Basque Country can be a challenge for the different teams taking part in the care of the victims. In order to be able to both quickly and efficiently help victims, all groups' performance plans must be carried out jointly. General objectives: To describe the performance protocol of maritime incidents with victims. Specific objectives: To determine the existing resources, and examine their tasks. Methodology: 1. Research the characteristics of the resources participating. 2. Study the protocol of performance of maritime incidents with victims. 3. Bibliographic revision 4. Photographic material. Results: In the Basque Country, when a maritime incident takes place, the coordination is always carried out through the Coordination Centre, the so called SOS DEIAK (112).Once the necessary data has been collected, the relevant performance programme is activated: "TACTICA URA"; and some resources will be mobilized either in an automatic manner or in a deferred manner depending on the type and degree of the incident itself. Conclusions: The plan to include all teams involved in a protocol of performance before maritime incidents is necessary for the coordination of the different rescue means. By doing this, not only will both, the rescue itself and the sanitary assistance offered to the victim be of great efficiency, but the risks involved to the rescuers themselves will also be minimized.

HEALTH CATASTROPHE ORGANIZATION

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Objective:Explaining the medical regulation,triage and evacuation in a massive intoxication,probably by chlorine inhalation. Methods:80 Moroccan and South American Women, about 20 and 40 years old, presumly inhaled chlorine which proceed from the water which washed fruit in a store.From the Urgency Coordinating Center of 061 Aragón,the Coordinator doctor moviliced sanitary resources needed to attend and evacuate to the patients.In Fraga Health's Center,the operation Center was placed.A 061 emergency nurse made the triage,classifying patients depending on the symptoms (ocular,nasal and oropharyngeal mucus irritation, cough,tachycardia,tachypnea,dyspnea and anxiety) in slight and serious cases.The 061 emergency doctor organized the medical care and decided the priority in the evacuation.At 4 emergency rooms,doctor and nurse teams,attended to slight patients. In the sitting room,5 beds were fitting out where 3 doctor and nurse teams attended to serious patients,who needed medication (humidified oxygen,serumtherapy,bronchodilators and cortisone).The Coordinator doctor said the number of subjects that each hospital could receive. The emergency nurse with Proteccion Civil and Ambulancia Azul were responsible for placing patients in the ambulances,registering the destination. Each patient took a triage card (identification,exploration and vital signs). Results: Toxicology Service recommended a chest X-ray to the patients with symptoms.A total of 47 women were taken to different hospitals(7 of them were keeping under observation)The rest of the patients who hadn't symptoms or very slight ones,were sent to their homes with a medical report,for checking in 24 hours.31 of them were discharged after the examination (in the Health's Center)and 2 patients with persisted symptoms were sent to their Medical Care Fund. Conclusion: An Emergency Plan is necessary in all catastrophes and it must be known by public services,security and medical corps. It's important to alert to 112 early.

DELAY IN THE ACCESS TO THE HOSPITAL OF PATIENTS WITH ACUTE MYOCARDIAL INFARCTION (AMI). ANALYSIS OF REGISTRY RESIM DATA (REGISTRY OF ACUTE MYOCARDIAL INFARCTION IN THE EMERGENCY SERVICES OF SPAIN)

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Aims: The fibrinolytic treatment in the AMI with ST-segment elevation obtains maximum benefits in the first two hours since the symptoms star. The delays in the Hospital admittance are due to the patient himself (delay in the request of medical assistance) and to the arriving time. The main objective of this study is to analyze if the existence of previous coronary events (PCE) o coronary risk facts (CRF) affects in a quicker access to the hospital of the patients suffering an AMI. Methodology: We took the 1974 patients data included, from January 2001 to May 2003, in the national registration RESIM with the participation of 27 Spanish hospitals. To analyze the relation between variables PCE and CRF with the global prehospital delay has been used an average comparison, applying a non parametric test (U of Mann-Whitney).On the other hand, to analyze the prehospital emergency system we have calculated the Chi-square of Pearson. Results: We took the 1974 patients (1467 men and 503 women), aged average of 66,1 year (SD 13,5). On 1741 patients (88.19%) there were known coronary risk factors. 487 patients suffered previous coronary events (24.67%). The global prehospital delay was of 137 minutes (median; percentile 25: 72 minutes, percentile 75: 270 minutes). None of both variables (PCE and CRF) had any influence on a faster access to the hospital (PCE: U of Mann-Whitney p= 0.067; CRF: U of Mann-Whitney p=0.576) nor in the use of prehospital emergency system 061 (chi-square; CRF: p=0.768; PCE: p=0.377). Conclusions: 1. Prehospital delay of RESIM patients is high, with a median above two hours. 2. The existence of risk factors o previous coronary events has no influence on a quicker access to the hospital. 3. We consider necessary to develop specific programs for emergency assistance meant for this group of patients in order to reduce the prehospital delay in the presence of evocative symptoms of AMI.

UNIDAD DE SEMICRÍTICOS: ESTUDIO DE ACTIVIDAD ASISTENCIAL Y CONCORDANCIA DIAGNÓSTICA CON EL ÁREA DE HOSPITALIZACIÓN

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Introducción: La implantación de Unidades funcionales en los Servicios de Urgencias hospitalarios permite una mejor definición diagnóstica y mayor estabilización clínica del paciente. La Unidad de semicríticos de nuestro Servicio se crea como una Unidad funcional no monográfica en la que se ubican aquellos pacientes hemodinámicamente inestables, o que por su patología requieran unos métodos diagnóstico - terapéuticos extraordinarios. Objetivos: 1. Características epidemiólogicas y clínicas de los pacientes ingresados. 2. Determinar los tiempos de estancia medios en dicha unidad. 3. Destino final del enfermo. Material y métodos: Estudio descriptivo, realizado en un SUH de que incluye la revisión retrospectiva del libro de registro de ingresos en la Unidad de Críticos desde su creación (actividad de 2 meses.). Resultados: Durante el período de estudio acudieron al Servicio de Urgencias un total de 13.916 pacientes, de ellos fueron ingresados en la Unidad de Críticos 121 (8,7%). El 68,6 % eran varones. La edad media fue de 62,5 años. En el 66% de los casos los pacientes tenían factores de riesgo o antecedentes relacionados con su patología de ingreso. El 68% de estos pacientes tuvieron una estancia media inferior a 12 horas. Ingresaron en la Unidad de Cuidados Intensivos un total de 23 pacientes (19%) . Altas a domicilio hubo 13 pacientes (9%). Dichos pacientes aparecen distribuidos por grupos diagnósticos y destino final en la siguiente tabla:

Patología	Concordancia diagnostica	Total: 121
Cardiopatía isquemica	55,5%	27
Arritmias	92,8%	13
Insuficiencia cardiaca	81,2%	16
Patología respiratoria	87,5%	28
Hemorragia digestiva	96%	9
Otros diagnosticos quirurgicos	100%	5
Enfermedad Cerebro-vascular	100%	3
Intoxicaciones	100%	6
Cetoacidosis diabetica	100%	7

Conclusiones: Los enfermos susceptibles de ser ingresados en la Unidad de Semicríticos representa una parte importante de los pacientes atendidos en el Servicio de Urgencias. La patología médica es predominante en dicha Unidad, de ella el grupo más numeroso corresponde a Cardiología. La concordancia diágnostica entre diagnóstico al ingreso en la Unidad y al alta hospitalaria es superior al 90%, siendo los motivos de error mas frecuentes la valoración clínica insuficiente.

ANALISIS DE LA ACTIVIDAD EN LA DONACION DE TEJIDO CORNEAL DESDE UN SERVICIO DE URGENCIAS

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Objetivo: Análisis del modelo de detección de donante de corneas implantado en la Fundació Hospital Son Llatzer. Resultados. El modelo de detección utilizado implica el aviso por parte de Admisión de Urgencias a la Coordinadora de Enfermería que realiza una primera selección, registrándose los motivos en caso de exclusión, y el posterior aviso al Coordinador de Trasplantes. El funcionamiento del plan de detección cubre el horario desde las 8.00 hasta las 22.00h, descartándose los exitus producidos fuera del mismo. El número total de pacientes fallecidos en la F. Hospital Son Llatzer desde Agosto a Diciembre del 2002 ha sido de 155. De estos 85 (55%) se han producido durante el horario de actividad de la detección. El 63% (54) de estos fallecidos se consideraron como posibles donantes, de los que el 40% se calificaron como potenciales (32), según los criterios de exclusión aplicados que se corresponden con los propuestos por la Asociación Española de Bancos de Tejidos (AEBT). El número total de donantes reales fue de 24 lo que constituye un 28 % del total de exitus registrados. La causas de fallecimiento de los donantes fueron: patología cardiológica (37%), tumoral (33%), respiratoria (8%), digestiva (8%) y otras (4%), siendo las causas de contraindicación para las donación: edad >80 años (70%), enfermedad de origen desconocido (15%), UDVP (15%) y sepsis (7%). Conclusión. Mediante la aplicación de este modelo de detección de donantes de cornea en asistolia ha sido posible obtener un total de 24 donantes en un periodo de 5 meses, lo que representa un 28% de los fallecimientos que se han producido entre las horas de actividad de la donación.

TRATAMIENTO EN DOMICILIO DE LA TROMBOSIS VENOSA PROFUNDA

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Objetivo: Valorar la idoneidad del tratamiento extrahospitalario en la fase aguda de la trombosis venosa profunda (TVP) con dosis única diaria de heparina de bajo peso molecular ajustada al peso del paciente (Tinzaparina sódica), previo diagnóstico por Ecodoppler en el Servicio de Urgencias. Metodología: Se diseñó un estudio prospectivo de los pacientes con TVP que consultaron a nuestro Servicio de Urgencias entre enero de 2000 y diciembre del año 2002, tratados domiciliariamente. Se aplicaron los criterios de exclusión de Wells (TEP, hemorragia activa o alto riesgo de hemorragia, flegmasia, necesidad de hospitalización por patología concomitante, edad menor de 18 años) y criterios generales de exclusión de hospitalización domiciliaria (problemática de habitat, familiar, del cuidador y económica). El diagnóstico en todos los casos se confirmó por Ecodoppler. Se analizan variables epidemiológicas, factores de riesgo y patología asociada, clínica, localización y topografía de la TVP, resultado de Dímero D y efectividad del tratamiento (índice de reingreso hospitalario y complicaciones). Se facilitó una hoja de intrucciones para el paciente y se solicitó el consentimiento informado. El control lo realizó la Unidad de Hospitalización Domiciliaria (UHD) efectuándose al alta del paciente un cuestionario de satisfacción. Resultados: Durante el periodo de la muestra se diagnosticaron un total 314 pacientes de TVP, de los cuales 114 tuvieron criterios de exclusión (36.4%). En 106 casos por criterios de Wells (TEP 86, patología concomitante 11, riesgo hemorrágico 5 y flegmasia 4) y en 8 casos por criterios de exclusión para UHD. Muestra: 200 pacientes, 89 hombres (44,5%) y 111 mujeres (55,5%), con edades comprendidas entre 19 y 99 a. (promedio de 70,6 años) siendo el 80% mayor de 65 años. Factores de riesgo y antecedentes patológicos: Sin factores de riesgo 19.5%, Inmovilidad 33%, HTA 35%, Neoplasia 32,5%, Cardiopatía 23%, Diabetes Mellitus 16,5%, Dislipemia 16%, LCFA 14,5%, AVC 10%, TVP previa anterior a 5 años 8%, Cirugía previa menor de un mes 5%, Traumatismo previo 4%. Clínica: Se objetivó edema en el 91,5% de los casos y referían dolor el 70,5% de los pacientes. Localización y Topografía: En extremidades inferiores 193 casos (96.5%), 126 casos en EII y 67 casos en EID) y en extremidades superiores 7 casos. Femoro-poplitea 42,5%, Poplitea 35,5%, Ileofemoral 11,0%, Femoral 4%, Ileo-femoro-poplitea 3,5% y Axilo-subclavia 3,5%. Dímero D >0,5: En el 98% de los casos. No se han producido ingresos hospitalarios, episodios de TEP ni complicaciones hemorrágicas. La evolución clínica no ha sido distinta a las TVP tratadas en régimen hospitalario convencional. Realizaron consulta telefónica por diferentes motivos 71 pacientes (35.5%). El grado de satisfacción resultó muy favorable en todos los casos. Conclusiones: El tratamiento domiciliario con dosis única diaria de Tinzaparina sódica en pacientes seleccionados, es la alternativa terapéutica de elección de la TVP en fase aguda, que mejora la eficiencia hospitalaria y es bien aceptada por el paciente. Agradecimientos: Servicio UHD Dr.A.Obiol, Sra.M.Bartrés, Servicio Cir.Vascular Dr.P.Carreño.

EVALUACIÓN DEL TRATAMIENTO DEL TROMBOEMBOLISMO PULMONAR CON TINZAPARINA SÓDICA

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Objetivo: Valorar la eficacia del tratamiento del tromboembolismo pulmonar (TEP) con dosis única diaria de Tinzaparina sódica subcutánea ajustada al peso del paciente. Metodología: Estudio de los pacientes con TEP desde julio de 2000 hasta diciembre del 2002, tras aplicación de protocolo de tratamiento de TEP con dosis única diaria de Tinzaparina Sódica. El protocolo excluye a pacientes con TEP con criterio de ingreso en UCI (taquipnea >30 rpm, hipoxemia PaO2/FiO2<250mmHg o necesidad de VM, hipotensión grave, oliguria o IRA, transtornos de ritmo cardíaco, transtorno agudo grave de conciencia y por patología de base), TEP de origen séptico y pacientes con peso > 100 Kg.. Para el diagnóstico de TEP se realizó gammagrafía pulmonar. Se analizan variables epidemiológicas, factores de riesgo, clínica, gasometría, resultado de Dímero D, pruebas complementarias básicas y dirigidas, y efectividad del tratamiento (evolución y complicaciones). Resultados: Fueron diagnosticados de TEP un total de 84 pacientes, excluyéndose 10 pacientes por criterios de ingreso en UCI y 2 pacientes con TEP de origen séptico. La muestra resultante fue de 72 casos: Por sexo: 15 hombres (37.5%) y 25 mujeres (62.5%), con edades entre 20 y 96 a. (promedio de 75,2 años). Factores de alto riesgo: Sin factores de riesgo 25%, Inmovilizaciones 27.5%, Neoplasia 31,4%, TEP o TVP previos 12.5%, Cirugía mayor 12.5%, AVC 12.5%, Gestación 2.5%. Clínica: Disnea aguda 80%, Dolor torácico 42.5%, Tos 22.5%, Fiebre 17.5%, Hemoptisis 7.5%, Dolor gemelar 7.5%, Mareo 5%, Broncoespasmo 2.5%, Síncope 2.5%, Desorientación transitoria 2.5%. Gasometría: pO2 <60 en 65% de pacientes. Dímero D >0,5: 95%. ECG: Normal 37.5%, Bloqueo rama 22.5%, S1Q3T3 15%, Taquicardia 15%, Arritmia supraventricular 12.5%, Ritmo nodal 2.5%, Ritmo marcapasos 2.5%. RX Tórax: Inespecífica 70%, Atelectasia o infiltrado 20%, Derrame pleural 7.5%, Elevación diafragmática 2.5%, Infarto 2.5%. Foco embolígeno: Se detectó en 55% de los casos. Gammagrafia pulmonar: Alta probabilidad al 70%, mediana 12.5% y baja 17.5%. Evolución: Exitus 8 (11,1%), 6 pacientes con neoplasia diseminada, 1 en postoperatorio y 1 paciente con TEP de repetición. No se han registrado complicaciones hemorrágicas. Conclusiones: El tratamiento del TEP con dosis única diaria de Tinzaparina sódica en pacientes sin criterios de ingreso en UCI es una buena alternativa terapéutica, que mejora la eficiencia hospitalaria, evita controles analíticos, disminuye actuaciones de enfermería y aumenta la confortabilidad del paciente.

ASPECTOS ORGANIZATIVOS Y VARIACION DE LA TASA DE INGRESO HOSPITALARIO DURANTE EL BROTE DE LEGIONELLA DE MATARO

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Objetivo: Describir el dispositivo asistencial adoptado durante el brote de legionelosis ocurrido en Mataró en agosto de 2002, y evaluar el impacto de dicho dispositivo en criterios de adecuación de ingreso hospitalario. Metodologia: A partir de la declaración del brote (viernes 9 de agosto) se crea un equipo de coordinación asistencial formado por miembros del servicio de urgencias, medicina interna, laboratorio, y dirección. Se elabora un registro de todos los enfermos con neumonía con los datos clínicos y epidemiológicos más relevantes. Se elabora una guía clínica de actuación para estos enfermos. Se establece un circuito de revisita a las 24 horas en el SU de pacientes con fiebre, vecinos del barrio afectado sin neumonía, y se habilita un sistema de control en hospital de día de enfermos con neumonía por Legionela sin criterios de ingreso hospitalario. El dispositivo fue íntegramente operativo a partir del miércoles 14 de agosto. Se analiza el impacto asistencial del brote de Legionella y si existieron cambios en los criterios de ingreso hospitalario relacionados con las medidas adoptadas. Resultados: Se diagnosticaron un total de 144 pacientes con neumonía, 89 hombres y 59 mujeres, con una edad media de 58,6 años. En 108 casos se detectó antígeno de Legionella en orina. Ingresaron 94 pacientes (65%), de los cuales 39 (41.5%) presentaban insuficiencia respiratoria (pO2<60), la estancia media de los pacientes hospitalizados fue de 6,12 días. 2 pacientes fallecieron (1,38%). Durante el inicio del brote (antes del día 14) se atendieron 59 pacientes con neumonía, de los cuales 19 tenían I.R. (32,2%). En los 40 restantes, 27 (67,5%) fueron ingresados en el hospital. Con posterioridad al día 14 se atendieron a 85 enfermos, de los cuales 20 tenían I.R. (23,53%). Ingresaron 28 de los 65 enfermos restantes (43%). Esta disminución en la tasa de ingreso en los pacientes con neumonía sin IR es estadísticamente significativa (p=0.015). No existen diferencias entre ambos grupos de pacientes al analizar la edad, sexo, y comorbilidad asociada. Conclusiones: La puesta en marcha de un equipo multidisciplinar coordinando acciones de índole hospitalario i ambulatorio permitió afrontar con éxito el brote de legionelosis de Mataró. Dicho dispositivo permitió disminuir la tasa de ingreso hospitalario en una situación compleja tanto desde el ámbito sanitario como social y mediático. Estimamos que el dispositivo asistencial adoptado permitió una reducción de unos 16 ingresos y 98 estancias a lo largo de 2 semanas, hecho que facilitó evitar el colapso del hospital, y permitió la atención en nuestro centro de todos los casos de legionelosis diagnosticados en nuestra ciudad.

BROTE EPIDÉMICO DE NEUMONÍA POR LEGIONELLA: 108 CASOS CONFIRMADOS

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Introducción: En agosto de 2002, se declaró en la ciudad de Mataró un brote epidémico de neumonía por Legionella que ha resultado ser uno de los más importantes de los registrados hasta la actualidad en nuestro país por el número de casos confirmados. Definimos como caso confirmado: neumonía con inicio de síntomas a partir de 15 de julio, confirmación microbiológica y relación del enfermo con el barrio afectado. La Legionella pneumophila es un BGN aerobio que causa infecciones esporádicas o epidémicas, por transmisión aérea y con intervención de sistemas con contenido acuoso como las torres de refrigeración, manifestándose con neumonía o con fiebre sin neumonía (Fiebre de Pontiac). Objetivo: Analizar y valorar la actuación del Servicio de Urgencias (SU) de nuestro hospital, frente al brote de Legionelosis que afectó a Mataró del 9 al 31 de agosto de 2002, desde el punto de vista

asistencial y organizativo. Metodología: Estudio descriptivo de los casos sospecha y casos confirmados de neumonía por Legionella durante el brote epidémico. Analizamos sistemática de cribaje, datos socio-demográficos, clínicos, microbiológicos e evolutivos basándonos en la revisión de la metodología asistencial utilizada que incluye Trayectoria Clínica de Urgencias (TCU) y Registro General de Pacientes (RGP). - La TCU para "Sospecha de infección por Legionella" se aplicó en zona de cribaje al 4º día de declararse oficialmente el brote e incluyó: datos de filiación, confirmación de relación del enfermo con la zona afectada, sintomatología, constantes vitales, pulsioximetria, recogida de muestras de sangre y orina, hemocultivos y solicitud de Rx. - El RGP incluyó: datos de filiación, fecha ingreso en SU, inicio de síntomas, datos clínicos y radiológicos, factores de riesgo, Ag. urinario y destino del paciente. - Se han comparado resultados con otras epidemias por Legionella dentro del ámbito territorial español y de la Comunidad Europea. Resultados: - El RGP recoge 144 neumonías con sospecha de infección por Legionella atendidos en nuestro SU, de los cuales 108 caso confirmado (94 % vecinos de la zona y 6% con relación laboral). - Por sexo: 89 hombres y 55 mujeres (H/M=1.61) con una media de 58.6 años y un rango entre 16 y 90 a. - Presentaban insuficiencia respiratoria 39 (27.08%) y el índice de ingreso hospitalario fue del 65.27%. Para el control evolutivo y confirmación de casos en 48-72h del alta del SU, se creó un dispensario específico en Hospital de Día. - Factores de riesgo en los 108 casos confirmados: Fumadores 45.1%. Sin factores de riesgo 26.5%. Diabetes 26%. MPOC 10.9%. Antecedentes neoplasia 5.9%. Inmunosupresión 5%. Alcohol >80gr/d 4.5%. - La mortalidad fue de 2 pacientes (1.38%), ambos casos confirmados. - Se abrieron 148 TCU, comprobándose que se aplicó a la totalidad de pacientes afectados por neumonía por Legionella después de la declaración del brote epidémico. El cumplimiento de registros fue del 100%. Conclusiones: - Por número de casos confirmados de neumonía por Legionella este brote epidémico ha resultado ser el segundo registrado en España y el primero en Catalunya, con un menor porcentaje de ingreso hospitalario respecto a otros brotes importantes dentro del ámbito territorial español y de la Comunidad Europea y con una inferior mortalidad. Ha afectado a una población mayoritariamente joven, de sexo masculino y como factores de riesgo destacan tabaquismo y Diabetes Mellitus. - La TCU para "Sospecha de infección por Legionella" ha resultado una herramienta básica para el cribaje y control de los pacientes en el SU, proporcionando respuesta rápida y eficaz en el diagnóstico. La TCU también ha disminuido la variabilidad de criterios y ha favorecido el trabajo en equipo. - El RGP ha proporcionado la valoración continuada de la dimensión del brote epidémico, la confirmación y evolución de los casos y la información necesaria a las autoridades sanitarias y medios de comunicación. - El trabajo coordinado y la aplicación de una adecuada organización y metodología, ha permitido una respuesta eficaz y eficiente de nuestro SU ante una situación de presión asistencial y alarma social.

TRASTORNOS PSICOLÓGICOS DEL INMIGRANTE EN UN SERVICIO DE URGENCIAS. (SÍNDROME DE ULISES)

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Introducción: Más de 340.000 extranjeros viven en Cataluña, cifra triplicada en los últimos cinco años. En este colectivo la salud mental puede representar un problema importante. Un estudio de Médicos del Mundo en 1.999 reveló que el 90% de las enfermedades de los inmigrantes estaban causadas por condiciones de estrés y de inestabilidad emocional, laboral y económica. El Dr. Achotegui describe como Síndrome de Ulises, al conjunto de males psíquicos y físicos que afectan a los inmigrantes, causados por una mezcla de desadaptación, sensación de fracaso, confusión, miedo, despersonalización, soledad y desarraigo. Nuestro hospital tiene un área de influencia de aprox.230.000 habitantes. Mataró, su capital tiene 105.000 habitantes, representando la población legal ("con papeles") de origen Magrebí y subsahariano el 5,5% del censo. Objetivos: Cuantificar e identificar la demanda asistencial en salud mental de los inmigrantes magrebís y subsaharianos, atendidos en el servicio de urgencias (SU) del Hospital de Mataró y valorar si puede establecerse relación con el Síndrome de Ulises. Metodologia: Estudio descriptivo, de las consultas del grupo de población inmigrante magrebí y subsahariano atendido en nuestro SU, unidad de salud mental, durante el año 2.002. Analizamos datos sociodemográficos y grupos de patología según clasificación DSM-IV, determinando si se identifica el Sdme. de Ulises, que relaciona inmigración con sintomatología como: ansiedad, depresión, tristeza, temores, irritabilidad, trastornos disociativos, psicosomáticos e incluso psicóticos. Resultados: Nuestro SU atendió el año 2002 más de 109.000 consultas. Un 7% del total son pacientes de la población inmigrante estudiada (55% hombres) con un índice de ingreso del 7,97 %. El resto de la población representa el 93% de las consultas (48% hombres) y su índice de ingreso es del 9,96%. Del total de ingresos el 5,6% son africanos (4,3% suprimiendo partos) y 94,4% del resto de población. La unidad de salud mental atendió 1315 consultas (1,2% del total), con una media de edad de 36 años. Por sexo 50,4% hombres con una media de 36 años y 49,6% mujeres con una media de 38,4 años. El porcentaje total de ingreso fue del 19,8%, de los cuales 53,6% hombres y 46,4% mujeres. Por sexo el índice de ingreso en la mujer es del 18,96% y en el hombre del 23,21%. Del grupo poblacional causa de estudio, se atendieron 55 consultas (42 pacientes), lo que representa un 4,18% del total. La media de edad es 29,4 años. Por sexo 34 hombres (61,8%), con una media de 29,4 años y 21 mujeres (38,2%), con una media de 29,5 años. Por grupos de patología DSM-IV: T.psicótico 26 (47.3%), T.adaptativo 9 (16.36%), T.disociativo 8 (14.5%), T.bipolar 5 (9.1%), T.por alcohol 5 (9.1%), T.por cocaína 1, T.distímico 1. Ingresaron 15 pacientes (5,32% del total de ingresos psiquiátricos) siendo el índice de ingreso hospitalario de este grupo del 27,3%, un 53,3% hombres y 46,7% mujeres. Por sexo el índice de ingreso en la mujer es del 33,3% y en el hombre del 23,5%. Las causas de ingreso fueron: T.psicótico 13 (86.7%)7 hombres y 6 mujeres,T.adaptativo 1,T.disociativo 1. Conclusiones: - El porcentaje de consultas psiquiátricas del grupo de población inmigrante estudiado, está próximo en proporción al de la población general pero el perfil de paciente es diferente, tiene una edad significativamente más joven, existe un predominio significativamente mayor de consulta por parte de hombres y el índice de ingreso es mayor en las mujeres, mientras que en el resto de población las consultas son proporcionales para ambos sexos con un índice de ingreso superior en los hombres. - Al contrario que en el resto de especialidades, existe un índice de ingreso por causa psiquiátrica en el grupo de inmigrantes superior al global de población, debiéndose fundamentalmente a la barrera idiomática, el bajo soporte familiar y el riesgo de incumplimiento terapéutico. - La patología prevalente es el trastorno psicótico, que además representa casi el 87% de los ingresos. - Por la sintomatología de los grupos de patología prevalentes, el alto índice de ingreso hospitalario y las diferencias de perfil del paciente psiquiátrico

del grupo de inmigrantes respecto al general, pensamos que puede identificarse una relación del Sdme. de Ulises con la patología mental de nuestra población inmigrante magrebí y subsahariana. - Debemos utilizar mediadores culturales y terapias psicosociales que ayuden al enfermo a reorganizar su vida relacional y social.

APLICACIÓN DE LA TRAYECTORIA CLÍNICA DE URGENCIAS EN UN BROTE EPIDÉMICO DE NEUMONÍA POR LEGIONELLA

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Introducción: El Hospital de Mataró tiene un área de influencia de 230.000 habitantes, dispone en máxima ocupación de 330 camas de hospitalización y en el año 2002 atendió más de 109.000 urgencias. En nuestro hospital se utilizan las Trayectorias Clínicas de Urgencias (TCU) como metodología de trabajo, de tal forma que consigamos unificación de criterios asistenciales, respuesta rápida ante la sintomatología, autonomía profesional y trabajo en equipo. En agosto de 2002, se declaró en la ciudad de Mataró un brote de neumonía por Legionella que ha resultado ser uno de los más importantes de los registrados hasta la actualidad en nuestro país. Ante la sobrecarga asistencial que previsiblemente podría producirse ante un brote epidémico, un grupo multidisciplinar confeccionó una nueva TCU para "Sospecha de infección por Legionella" que se aplicó de forma inmediata por el equipo asistencial en zona de cribaje a partir del 4º día de declararse oficialmente. Objetivo: Valorar la aplicación de la Trayectoria Clínica de Urgencias para "Sospecha de infección por Legionella" en el cribaje del Servicio de Urgencias (SU) de nuestro hospital, durante al brote que afectó a Mataró desde el 9 hasta el 31 de agosto de 2002. Metodología: Revisiones de las TCU abiertas durante el brote epidémico ante la sospecha de Legionelosis. La TCU incluye: datos de filiación, confirmación de relación del enfermo con la zona afectada, sintomatología, constantes vitales, pulsioximetria, recogida de muestras de sangre y orina, hemocultivos y solicitud de Rx. Datos de la TCU formaron parte de un Registro General de Pacientes (RGP) Resultados: - El RGP recoge desde el inicio del brote epidémico 144 casos de neumonía con sospecha de infección por Legionella atendidos en nuestro SU, de los cuales 108 casos son casos confirmados. - La TCU se aplicó a partir del 4º día de declaración del brote abriéndose un total de 148 procedimientos. - Se constató un 100% de cumplimiento de registros de la TCU. - Se ha comprobado que la TCU se aplicó (a partir del 4º día de declaración del brote) a 107 pacientes con neumonía, lo que significa la totalidad de pacientes afectados después de su puesta en marcha. La media de edad de los pacientes con neumonía a los que se aplicó la TCU fue de 52.9 años, el 67,3% hombres, el índice de ingreso fue del 62% y son 73 los casos confirmados microbiologicamente (68,2%). Conclusiones: - Muchos de los registros de la TCU fueron incluidos en el RGP que ha proporcionado la valoración, tanto continuada como final, de la dimensión del brote epidémico de neumonía por legionella, que ha resultado ser por número de casos confirmados, el segundo registrado en España y el primero en Catalunya. - Pensamos que el completo cumplimiento de registros se debe al alto grado de sensibilización del personal ante una situación de presión asistencial y mediática. - La TCU para "Sospecha de infección por Legionella" ha resultado una herramienta eficaz para el cribaje y control de los pacientes en el Servicio de Urgencias. - La TCU ha permitido que en muchos casos el equipo facultativo haya realizado la valoración del paciente disponiendo de todos los resultados de las pruebas complementarias. Ha proporcionado respuesta rápida en el diagnóstico y ha favorecido el trabajo en equipo, disminuyendo la sensación de sobrecarga asistencial.

FAMILY WITNESSING DURING RESUSCTITATION ATTEMPTS IN THE OUT-OF-HOSPITAL SETTING

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The prehospital emergency personnel (EP) have to work in different settings, usually in the house of the patient and with the family witnessing the situation. The family members can see how we proceed to venous catheterization, how the patient is electrocardiographically monitories, or how a gastric ravage is carried out. Sometimes family members collaborate. But in the case of sudden death, when we should proceed to resuscitation attempts, which is the attitude of the EP regarding the family? How does the family react in such cases? Objectives: General. To carry out a survey about family witnessing during CPR in patients´ home setting Specifics: 1- To know the opinion of the ambulance personnel about family witnessing during CPR 2- To know the opinion of professionals trained on basic life support (firemen) about family witnessing during CPR. 3- To gather information about family reactions in resuscitation cases. Methods: -Bibliographical reviewing of MEDLINE papers and written medical literature. -Open, random interview which will be semi-directed to ambulance personnel (doctors, nurses and technicians) and firemen in Bizkaia. Results: These are the results of this pilot study directed to 68,33% of the ambulance personnel: -average age is 42,63 years; 75,6% of them working in emergency medical system for longer than 6 years; 80,48% of them have preformed more than 100 CPR. - 100% agree that the attitude of the emergency personnel at the arrival in patients´ home depends on physical space and emotional situation of family. In case of kind settings, 73,17% of doctors and nurses have no complaint about family witnessing, leaving the decision up to them -In 85,37% of the cases, family witnesses the CPR continuously or interruptedly. They leave the setting definitely before ambulance personnel has finished resuscitation attempts. -72,9% of technicians and firemen state that witnessing a CPR is a traumatical experience for the family -67,8% of doctors and nurses defend that it might be helpful Conclusions The EMS personnel should be sensitive regarding witnessing a CPR situation, interacting and giving information on reanimation attempts. We must be aware that in most cases, the family decides initially to remain in the setting. It is interesting to point out that doctors and nurses consider family witnessing can be helpful, while non sanitary professionals disagree with this statement.

HEMODYNAMIC INSTABILITY AND ATRIAL FIBRILLATION: IS DC CARDIOVERSION THE ONLY ALTERNATIVE? ANALYSIS OF CLINICAL PRESENTATION AND MANAGEMENT IN THE ACUTE SETTING (THE GEFAUR-3 STUDY)

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Objectives: To determine the real magnitude and clinical presentation of hemodynamic instability (HI) in patients (pts) with atrial fibrillation (AF) and to analyse management strategies (MS), its effectiveness and its influence on outcome in the acute setting. Methods: prospective multicenter study carried out in 12 emergency departments during July-2000, February-2001 and May-2002. HI was defined as symptomatic drop of BP (<90/50 or <30mm previous BP) and/or organ dysfunction [(severe heart failure (HF), angina, MI, renal failure, acidosis or others with immediate vital risk)]. Results: 2550 pts included, 59% female, age 75±12y. (58%>75y). HI was diagnosed in 4.5%, with a higher prevalence of structural heart disease (63vs51%, p=0.005, OR=1.2), CAD (37vs28%, p=0.05, OR=1.3), HF (34vs24%, p=0.02, OR=1.4), secondary (non-cardiac origin) AF (8vs3%, p=0.01, OR=2.5), rapid HR (64vs50%, p=0.02, OR=1.4) and <BP (100±30/60±20 vs 140±20/78±15 mmHg, p<0.001). Pts with IH attended more frequently due to dyspnea (50vs33%, p=0.001, OR=1.6) and syncope (10vs3%, p=0.02, OR=3.3). In the multivariate analysis HI was associated with syncope (p=0.02), HF (p=0.005), HR<60 (p=0.02) or>100bpm (p=0.001). IH was attributable to non-cardiac diseases in 33% (56% sepsis, 8% thyrotoxicosis, 7% pulmonary thromboembolism, 7% hypoxemia). Rate control (RC) was more frequently performed (50vs31%, p<0.001, OR=1.6) due to a higher use of calcium-blockers (21vs11%, p=0.005, OR=2) as were anticoagulation (72vs58%, p=0.04, OR=1.4) and cardioversion (CV) (20vs8%, p=0.05, OR=2), higher use of DC-CV (18vs7%, NS) and amiodarone (90vs45%, p<0.001, OR=2.1). RC (68vs18%, p<0.001, OR=6.4) and CV (38vs15%, p=0.07, OR=3.3) were more frequently performed if HR>100 bpm, no MS were applied if HR<60. In the multivariate analysis RC was associated with absence syncope (p=0.02) and HR>100bpm (p=0.02) as was CV with hypertension (p<0.001), AF<48h (p<0.001), angina (p<0.001), dyspnea (p<0.001) and sex (male, p=0.05). Symptom control was more frequently achieved if IH was related with AF (55vs35%, p=0.007, OR=1.8), calcium-blockers were used for RC (60vs28%, p=0.05, OR=2.2) or CV was effective (66vs14%, p=0.05, OR=4.7). IH was associated to a longer ED stay (76vs45%>4h, p=0.002, OR=2) and more admissions (77vs49%, p<0.001, OR=1.6). Overall mortality was 6.25% (half of them attributable to non-cardiac diseases), no differences between MS. Conclusions: IH is an uncommon feature of AF in the acute setting, usually manifested as dyspnea or syncope. RC (calcium blockers) and pharmacological-CV (amiodarone) are more used MS but the therapeutical gold standard (DC-CV) is underused. Despite of this, symptom control is frequently achieved and overall mortality is surprisingly low (possibly biased for the short stay of these pts in the ED). Although DC-CV is the best MS in most of pts, our data suggest that RC could be an acceptable alternative when there are very few possibilities of achieving sinus rhythm (structural HD, higher HR, long duration AF) and in secondary (non-cardiac origin) AF.

RISK FACTORS FOR STROKE AND THROMBOPROPHYLAXIS IN ATRIAL FIBRILLATION. WHAT HAPPENS IN DAILY CLINICAL PRACTICE? (THE GEFAUR-1 STUDY)

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Background: The indications for stroke prophylaxis in atrial fibrillation (AF) are detailed in widely available guidelines based on the results of several clinical trials. However, there is contradictory data concerning the applicability of these recommendations in daily practice due to differences on patients' risk profiles (embolic and haemorragic). Objectives: to determine patients risk profile, the real prescription of stroke prophylaxis and the applicability of the guidelines (ACCP, 1998) in a scenario of daily clinical practice. Methods: Prospective observational study carried out in 12 emergency departments (ED). Data was collected on clinical-epidemiological variables, risk factors (RF) for stroke, the prophylaxis prescribed and the reasons for no anticoagulation. Therapeutic recommendations were not made. Results: We included 1,178 patients, age 74±12 years, 55.6% older than 75 (28% of them disabled). Hemorrhagic complications of current antithrombotic treatment (ATT) were responsible for the ED attendance in only 0.8% of the cases and 1.8% of hospital admissions while embolism was responsible of 3.7% and 10.5% of them. Of patients without current ATT, 86% had RF for stroke (2 RF 28%, >2 RF 30%), but anticoagulation was only prescribed to 31.8%.In the multivariate analysis its indication was only associated to paroxysmal AF (OR=3.61; p<0.001) and a heart rate > 100 bpm (OR=1.69; p=0.03),while a negative correlation was obtained with disability (OR=0.28; p=0.012), current antiplatelet treatment (OR=0.04; p<0.001) and cardioversion attempt in the ED (OR=0.24; p=0.039). Anticoagulants were formerly contraindicated in 23 % . Reasons argued for not to prescribe anticoagulants in spite of the presence of RF for stroke were advanced age (12%), high risk of haemorrhage (28%) or it was not considered indicated by the physician (24%). Conclusions: Patients with AF attended in the ED have a higher embolic risk than those included in clinical trials and a similar risk of haemorrhage. It suggests that the benefits from acting in accordance with the guidelines recommendations in ED daily practice would be even greater. In spite of this, the prescription of anticoagulants is insufficient, fundamentally due to the lack of knowledge about the indications for prophylaxis and the inappropriate impact of the advanced age of the patients in medical decisions. Given the high effectiveness of antithrombotic treatment, application of clinical practice guidelines in routine practice should be emphasized with the aim of improving the prognosis and quality of life of these patients.

PARADAS CARDIORRESPIRATORIAS ATENDIDAS POR HELICÓPTERO MEDICALIZADO

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INTRODUCCIÓN: La contribución de los Helicópteros Medicalizados (HEMS) a la cadena de supervivencia en la RCP esta poco estudiada máxime con el modelo español de Medico y Enfermero como tripulación estándar de los HEMS. Nuestro objetivo, es conocer las características de los pacientes con PCR atendidos por un Helicóptero Medicalizado (Dauphin SA 365 N1) que opera H24 con posibilidad de vuelo IFR y un tiempo de respuesta inferior a los 10 minutos, utilizando para ello el modelo Utstein de recogida y clasificación de datos. METODO: Estudio retrospectivo de los PCR atendidas inicialmente y/o trasladadas por el HEMS del Servicio de Urgencias Canario (SUC) en la provincia de S/C de Tenerife en el periodo comprendido entre los años 1995-2002 ambos inclusive, correspondiendo la población cubierta a 798.534 habitantes. RESULTADOS: De lo 2336 activaciones del HEMS 60 correspondieron a PCR (2,5%) con una media de 8,5% PCR año, de ellas 48 (80%) corresponden a misiones primarias y 12 (20%) a secundarias (traslados interhospitalarios).

De los primarios 9 (18%) fueron anulados en vuelo por exitus del paciente.

CARACTERÍSTICAS DE LA RCP

	Nº pac.	nulos	Edad media	RCP presenciada	Recupera cir.	Vivos en Hosp.	Muere antes 15dias	Alta vivos
1º	48	9	42	18 37%	7 17.9%	7 17.9%	5 12.8%	2 5.12%
2º	12	0	48*	12 100%	12 100%	12 100%	5 42.5%	7 57.5%

* tres neonatos.

En cuanto a tiempo e intervalos en las misiones primarias el tiempo medio de vuelo de los registrados, fue 6,41 minutos (ST 5,74 minutos rango 2,27) el tiempo desde el aterrizaje hasta el contacto con el paciente 12,32 minutos (ST 11,86 minutos rango 4,49 minutos) y el tiempo total despegue-paciente 21,44 minutos (ST 14,04 minutos rango 6,90 minutos). DISCUSIÓN:

Los porcentajes de supervivencia en misiones primarias se asemejan a los del resto de la literatura española en cuanto a ambulancias medicalizadas, los cortos tiempos de vuelo indican una elección adecuada del medio asistencial por la sala 112. Sin embargo la orografía del terreno (islas montañosas) no permite en muchas ocasiones aterrizar cerca del lugar del incidente lo que pueda haber influido en los largos tiempo de acceso al paciente. En los traslados secundarios se observan la relación entre supervivencia y PCR presenciada, así como el sesgo de selección de pacientes al ser traslados interhospitalarios, con la adecuada preparación del paciente para el traslado (nula mortalidad en vuelo).

PHYSICAL ABUSE: WITH INTENTION TO PROSECUTE

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Introduction Violence is one of the major problems of Public Health on the planet. Women of the whole world, all ages and social conditions suffer gender violence. When a woman decides to face up to physical abusive situation, it is not normally after the first aggression, generally there has been an incident before. When a woman faces a new aggression she will go directly to the hospital or will go to the Police where she will be informed of the need to go to a hospital in order to make a judicial statement and initiate in this way proceedings to prosecute. Objectives: 1. Analyze the extent of abuse and describe different aspects of women that were consulted for abuse. 2.Assess the intention to prosecute. Methodology: A retrospective transversal descriptive study of 148 cases was carried out, women that reported abuse between 27 de junio 2002 and 28 de febrero2003 from a total of 7,993 women. The following facts were taken into account: age, assailant, where the attack took place, mechanism, location and anatomic description of the injury, need to report, existing abuse and/or previous prosecutions and women of independent means. Results: the average age was 35 years ranging between 14 and 68 years of age. The attacker was the husband in 55 cases, (36%), partner in 49 cases (33%) and the ex-husband in 15 cases (10%). The abuse took place at home in 104 cases (70%) and in the streets 27 cases (18%). The mechanism of the attack was direct physical contact in 114 cases (77%) with a blunt instrument in 20 cases (13%) and steel blade in 5 cases (3.4%). Injuries to the head and body in 140 cases (95%) and the most frequent were bruises, contusions, erosions and wounds. Fractures in 2 cases (1.3%), 75 (51%) cases of women of independent means, in 118 cases (80%) felt the need or had the intention to prosecute, in 118 cases (80%) of these 93 cases (79%) had been attacked previously and 54 cases (46%) in addition to this had already put in a the report. Conclusions: 1. The Physical injuries were mainly of light prognosis (kicks, slaps, punches), but cannot be minimized for this reason. 2. Psychological emotion caused by the attack is insufficiently shown in the hospital report. 3. It reveals that there is great necessity to have a report from the attacked/battered woman. 4. A high percentage of previous aggressions are shown. 5. The increasing demand for assistance for abused women in the Emergency Services, linked to the awareness of professionals people, this is the profile for said services to give the necessary help, support and active collaboration that is needed to initiate the interdisciplinary process in the resolution of abuse.

MANEJO DEL TRAUMATISMO AGUDO DE TOBILLO DE ETIOLOGIA DEPORTIVA EN EL SERVICIO DE URGENCIAS DEL HOSPITAL UNIVERSITARIO DE PUERTO REAL

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Objetivos: Realizar un estudio descriptivo, longitudinal-prospectivo sobre el manejo del traumatismo agudo de tobillo (TAT) en el Servicio de Urgencias (SU) del Hospital Universitario de Puerto Real (HUPR). Población a estudiar pacientes entre 18´40 años que hayan sufrido TAT de etiología deportiva. Metodologia: La exploración clínica fue realizada por los facultativos encargados de la sala de traumatología del SU del HUPR. La recogida de datos fue obtenida por un único investigador a través de las historias clínicas y encuestas telefónicas personalizadas. Las radiografías fueron reevaluadas por un único traumatólogo (Jefe de Sección de Cirugía Ortopédica y Traumatológica). Resultados: Las características antropomórficas de la población en estudio es la que sigue:

58,2% hombres/ 41,8% mujeres. Edad media. 28,5 años. Altura 1,70 cm. Peso: 73,8 kg Actividad deportiva: Más de un 60 % fútbol y marcha. Se realizan radiografías aproximadamente en un 90% de casos, de ellas sólo fueron clínicamente significativas un 8,5%. El tiempo de estancia en el SU fue de 3,4h, siendo la satisfacción del usuario adecuada en la mayoría de los casos. El tratamiento analgésico e inmovilizador sigue unos criterios similares no así el rehabilitador y profiláctico trombótico. El seguimiento de los pacientes se hace casi por igual por médicos de cabecera y traumatólogos de zona, existiendo una concordancia en el diagnostico al control posterior de cerca del 90%.Las incapacidades laborales que provoca esta patología son importantes, perdiéndose de media de 1 a 3 semanas en un 44% de pacientes que necesitan esta incapacidad transitoria laboral. Conclusiones: El estudio radiológico es excesivo en esta patología y su rendimiento diagnóstico es escaso. El tratamiento analgésico e inmovilizador sigue unos criterios de indicación uniformes, no así el antitrombótico y rehabilitador. La satisfacción general del usuario es adecuada pero el tiempo de espera es inadecuado.

AMBULANCIA SANITARIZADA: UN NUEVO RECURSO PARA LA ATENCION DE LAS EMERGENCIAS SANITARIAS EN CANARIAS

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Introduccion: El Servicio de Urgencias Canario (SUC) es la entidad que en la Comunidad Canaria tiene asignadas por la Consejería de Sanidad y Consumo la gestión y atención de las emergencias extrahospitalarias, y el transporte sanitario. Desde su inicio en 1994, se ha ido incrementando el número de los recursos terrestres para mejorar la calidad de la asistencia prestada. A lo largo de estos años se ha comprobado la existencia de zonas situadas a una isócrona mayor de 30 minutos de un recurso medicalizado, en las que no se justificaría desde el punto de vista de la eficacia y eficiencia, la incorporación de éste. Por tal motivo, y tras analizar la experiencia de otras CCAA en el uso de las llamadas Ambulancias Sanitarizadas, que disponen de un DUE, se diseñó un Plan Piloto para la puesta en marcha de este tipo de recursos en nuestra CA. Objetivos Y Metodologia: Descripción del Plan para la implantación de 4 ambulancias sanitarizadas en la CA Canaria. Resultados: El día 1 de Febrero, se iniciço la actividad de estos recursos, situándose en los municipios de Icod de los Vinos (Tenerife) y en Vecindario (Las Palmas de G.C.), estando previsto la implantación de otras 2 ambulancias en Mayo de 2003, en Santa Cruz de la Palma, y en Galdar (Las Palmas de G.C.). Estas ambulancias, cuentan con un DUE con una amplia experiencia en la atención de urgencias (tanto hospitalarias como extrahospitalarias) y emergencias, capacitado para realizar una valoración y tratamiento “in situ”, siempre teletutorizado por el Médico Coordinador del SUC. También cuentan con un equipamiento material que permite su medicalización en un momento dado (monitor, DEA con módulo de transmisión de ECG, respirador, etc)Se cumplimenta una Hoja de Registro por el DUE, en la que se recogen datos de filiación, anamnesis, valoración clínica, constantes y tratamientos administrados. Conclusiones: Se trata de un nuevo recurso, que aporta un valor añadido en la asistencia y tratamiento precoz de los pacientes.

ANALISIS DE LA ACTIVIDAD DE LA AMBULANCIA SANITARIZADA DEL SERVICIO DE URGENCIAS CANARIO EN TENERIFE EN LOS DOS PRIMEROS MESES DE ACTIVIDAD

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Introduccion: El Servicio de Urgencias Canario (en adelante SUC), entidad responsable de la gestión y atención de las emergencias extrahospitalarias, así como el transporte sanitario en la Comunidad Autónoma Canaria, valoró la posibilidad de la puesta en marcha de un nuevo recurso asistencial terrestre (Ambulancias Sanitarizadas), para la atención de las emergencias sanitarias en aquellas zonas que se encuentran a una isócrona mayor de 30 minutos de un recurso medicalizado, pero que por el número de población y el número de incidentes en los que se requiere la intervención de un recurso de soporte vital avanzado, no justificaría, desde el punto de vista de la eficacia y eficiencia, la implantación de éste. A tal efecto, se ha puesto en marcha desde el 1 de Febrero de 2003, un Plan Piloto consistente en la implantación de 4 ambulancias de estas características en nuestra Comunidad: ambulancias de urgencia, que además de contar con un Técnico de Transporte, cuentan con un DUE con amplia experiencia en urgencias hospitalarias y extrahospitalarias, que realiza una valoración y primera asistencia del afectado (siempre asistido y teletutorizado por el Médico Coordinador del SUC), y un equipamiento material que permitiría su medicalización en un momento dado (monitor, desfibrilador semiautomático, con módulo de transmisión de ECG mediante telefonía móvil, respirador de transporte, pulsioxímetro, etc.). En la provincia de S/C de Tenerife, se ha situado este recurso en la Comarca Noroeste de la Isla de Tenerife (en el municipio de Icod de los Vinos), y en la provincia de Las Palmas en el municipio de Vecindario, y está previsto la implantación de otras 2 ambulancias en Mayo de 2003, en Santa Cruz de la Palma, y en Galdar (Las Palmas de Gran Canaria). Objetivos: Valorar la existencia de mejora en la calidad de la asistencia sanitaria de los afectados atendidos mediante este nuevo recurso situado en el municipio de Icod de los Vinos, en Santa Cruz de Tenerife, así como el análisis de su actividad, durante los 2 primeros meses de actividad. Metodologia: Análisis de las Hojas de Registro de Enfermería de los afectados atendidos. Resultados: Número de incidentes: 201. Media diaria: 3,4 incidentes/ diarios. Primarios: 111. Secundarios: 83. Nulos: 4. Preventivos: 2. Falsas Alarmas: 1. La distribución de los pacientes atendidos por sexos, es de 53,6% varones y 46,4% mujeres. La edad media es de 57,2 años. Por días de la semana, el sábado (19%) es el día de mayor número de asistencias. En relación a la hora de activación, el 37,5% de los incidentes ocurren entre las 8 y las 15 horas, el 41% entre las 15 y 22 horas, y el 21,5% entre las 22 y las 8 horas. Respecto a la tipología de las asistencias, en el 76% de los casos de trataba de enfermedades, en el 6,2% de accidentes de tráfico, y el 17,8% restante se reparte entre otros accidentes (casuales, domésticos, laborales, escolares, deportivos), intoxicaciones y otros incidentes. En relación al municipio donde se atiende a los pacientes, en el 76,9% de los casos se trata de Icod, en el 7,6% Garachico, y en el 6% Los Silos, fundamentalmente. El origen de los pacientes, es un Centro de Salud, en el 40,2% de los casos, el domicilio en el 39,2%, y la vía pública en el 17,5%. Respecto al Centro de destino, en el 58,3% de los casos fue un Hospital de primer

nivel (Comarcal), y en el 26,3% de los casos, un Centro de Salud. Por patologías, destaca la patología traumática (18,7%), la respiratoria (17,6%), la digestiva (11,9%), y la cardiológica (9,9%). Por último, las técnicas realizadas por los enfermeros, han sido sobre todo la canalización de vía venosa y administración de fluidoterapia (63,4%), monitorización de pulsioximetría (55%), determinación de glucemia (39%), administración de medicación (39%), administración de oxigenoterapia (37%), monitorización de registro ECG (15,5%), otras técnicas de enfermería (6,7%), y maniobras de RCP-A en el 0,5% de los casos. Cuando ha sido necesaria la administración de medicación, siempre ha sido por prescripción de un Médico presente en el lugar, o por teletutorización del Médico del SUC. En el 1,5% de los casos, además se ha realizado la transmisión de datos biomédicos en tiempo real (ECG de 12 derivaciones a través de telefonía móvil), que es valorado por el Médico Coordinador del SUC. Conclusiones: La actividad fundamental de este recurso, ha sido sólo discretamente superior del transporte primario respecto al secundario, y sobre todo en horario diurno, realizando fundamentalmente asistencias por enfermedades comunes, y en mayor porcentaje los sábados. El destino fundamental de los pacientes, ha sido un Hospital Comarcal. La decisión del traslado, en el caso de emergencias, corresponde al Médico Coordinador del SUC, muy apoyada en la valoración que realiza "in situ" el profesional de enfermería. Predominan por patologías los cuadros de patología traumática, y de insuficiencia respiratoria aguda. La presencia de un enfermero, aporta un valor añadido a la asistencia sobre un recurso de soporte vital básico: permite una valoración del paciente más profunda, unas medidas de monitorización más estrechas, y la posibilidad de administración de medicación, siempre bajo la supervisión médica, lo que mejora la calidad de la asistencia, acercándose las primeras medidas terapéuticas de forma precoz al paciente.

FIRST EPISODE OF ATRIAL FIBRILLATION. HYPERTHYROIDISM?

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Goals: To find out the incidence of hyperthyroidism in patients undergoing a first episode of atrial fibrillation, without other symptoms of thyroid dysfunction and to assess the convenience of including thyroid function parameters in the ER laboratory tests. Methods: Descriptive-prospective study. Data were taken from 100 patients that entered the ER following their first episode of atrial fibrillation. Before therapeutic intervention, blood samples were taken to analyze thyroid function and immunological parameters. Patients with symptoms of thyroid dysfunction, previous thyroid pathology or former atrial fibrillation episodes were excluded from the study. In patients with confirmed thyroid dysfunction further studies were made to identify the underlying cause. Results: The average age of the patients in the study was 69.5 „b 13.7 years (37 males, 63 females), 7% of the patients had hyperthyroidism. In this group of patients, 71.4% had undetectable levels of TSH but total T3 and free T4 levels were normal. Causes of hyperthyroidism were distributed as follows: 2 autonomic nodules, 4 multinodular goiters, 1 silent autoimmune thyroiditis. Immunologic anomalies were detected in 10.8% of patients with normal thyroid function. There were no significant differences between the euthyroid patients and the patients with hyperthyroidism regarding age, sex, cardiac output or previous heart disease. Under pharmacological treatment, 85.7% of the patients with hyperthyroidism returned to normal sinusal rhythm versus 51.1% of euthyroid patients. In the group of patients with hyperthyroidism, 4 cases restored sinusal rhythm under treatment with amiodarone, and the remaining cases restored sinusal rhythm without using amiodarone. Conclusions: 1.) The incidence of subclinical-clinical hyperthyroidism in patients undergoing the first episode of atrial fibrillation, without other symptoms of dysfunctional thyroid, was 7%. 2.) In this study, those patients having a higher risk of hyperthyroidism could not be identified. 3.) 86% of patients with hyperthyroidism restored sinusal rhythm with the protocolized anti-arrhythmic treatment. 4.) Given the low incidence of hyperthyroidism and the good response to pharmaceutical treatment, we believe an urgent analysis of thyroid function is unnecessary, although this should be done in a later follow up.

INTEGRAL PROCESS FOR THE CARE OF ILL-TREATMENT

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In the report of the World Health Organization of September 2000, it is recognized that violence is one of the major public health problems around the world. The European Parliament in 1986 recommended to the state members a series of measures and actions to fight against ill-treatment. The CatSalut in 2001 had included among its quality objectives, a compromise for the early detection of ill-treatment situations that are considered a health problem. The City Council of Barcelona started an operative plan against women's violence 2001 - 2004. Because of worry and social alarm, particularly among health care personnel, the direction of the Municipal Institute of Health (IMAS) established a Technical Commission of the IMAS for the ill-treatment care. Objective: To present the protocols and algorithms for the detection and the plan of action for ill-treatment care developed by the Technical Commission of the IMAS. Methods: A Technical Commission for ill-treatment care was established by the IMAS, which was made by an interdisciplinary working team both of health care professionals and non-health care professionals from all IMAS centers. The general objective of the commission is to develop different protocols and algorithms for the detection and care of ill-treatment, as well as the diffusion, implementation, and sensitization of the problem at the levels of both users and staff of the different IMAS centers. Bi-monthly meetings had been performed (nine meetings) in which different subjects of the daily agenda had been discussed and agreements concluded. Results: Development and consensus of integral protocols for the detection and care of ill-treatment in children adolescents, women, and elderly. Development and registration of an anatomical map of lesions and/or judicial communication. Development of algorithms for the detection and plan of action in case of ill-treatment as a poster. Development of information posters and triptyches on the resources available for women in case of ill-treatment for their distribution and exposition in all IMAS centers. Introduction of the program of an emergency course for IMAS residents. At the present time, protocols and algorithms are being implemented. Conclusions: We believe that implementation of these resources will be an important technical incentive for the need of establishing a common framework, which would allow to organize in a coordinated manner all health care and medico-legal action plans in relation to this phenomenon.

EPIDEMIOLOGÍA DEL SÍNDROME LATIGAZO CERVICAL (SLC). PRESENTACIÓN DE 669 CASOS

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Objetivos: Estudiar el perfil y la gravedad de 669 pacientes con diagnóstico de Síndrome del Latigazo Cervical (SLC) atendidos en el Área de Traumatología del Servicio de Urgencias del Hospital de Basurto (Bilbao). Material y Métodos: Estudio prospectivo y descriptivo de 669 casos de cervicalgias pos-traumáticas atendidas en nuestro Servicio de Urgencias en el periodo de tiempo comprendido entre el 1 de enero y el 30 de junio de 2003. Criterios de inclusión: pacientes con dolor cervical por alcance tras accidente de tráfico. Criterios de exclusión: Pacientes politraumatizados. Antes de iniciar el trabajo confeccionamos una hoja de recogida de datos donde registramos las siguientes variables: Edad y sexo, día de la semana, accidente urbano o en carretera, conductor o pasajero, uso de cinturón de seguridad, mecanismo (alcance posterior, lateral o frontal), clínica asociada, exploración (puntos dolorosos a la palpación, contractura muscular, movilidad, fuerza muscular, ROT y sensibilidad), hallazgos radiográficos (a todos los pacientes se les realizo Radiografía de columna cervical 2p + funcionales) y clasificación según la Escala de Quebec (tabla 1). Resuldados: Las cervicalgias post-traumáticas representaron el 3,50% del total de urgencias traumáticas atendidas en nuestro servicio (19.241 pacientes). La edad mínima fue de 4 años y la máxima de 71 años. La distribución por edades y sexos queda reflejada en el Gráfico 1. La distribución por días de la semana fue un 14% (92 casos) los lunes, un 12% (83 casos) los martes, un 19% los miércoles (125 casos), un 11% (76 casos) los jueves, un 18% (119 casos) los viernes, un 11% (72 casos) los sábados y un 15% (102 casos) los domingos. El 59% fueron accidentes urbanos (397 casos) y el 41% accidentes de carretera (272 casos). En un 58% de los casos el paciente conducía (373 casos), el 28% eran pasajeros delanteros (178 casos) y el 16% pasajeros traseros (98 casos). En un 69% de los casos afirmaron llevar cinturón de seguridad (461 pacientes). El mecanismo lesional se expone en el Gráfico 2. El 34% de los pacientes (226 casos) presentaron sintomatología acompañante a la cervicalgia. Los signos clínicos y la exploración los exponemos en el Gráfico 3 y 4 y los hallazgos radiológicos en el Gráfico 5. En nuestra casuística sólo encontramos un caso de subluxación C4-C5 y una fractura- luxación C 6-C 7. La clasificación según la escala de Quebec queda expuesta en el Gráfico 5. Conclusiones: El SLC supone una patología frecuente en el Área de Traumatología de nuestro Servicio.

1. Mayor incidencia en varones, conductores y en edades comprendida entre 21 y 30 años.
2. La mayoría de los accidentes son urbanos sin diferencias significativas en el día de la semana.
3. Más de la mitad de los accidentados (69%) afirmaron llevar cinturón de seguridad.
4. El alcance posterior es el mecanismo lesional más frecuente (50%).
5. Además del dolor cervical, presentaron síntomas acompañantes más de 1/3 de los pacientes.
6. El dolor paravertebral con y sin limitación de la movilidad fue el signo clínico más relevante.
7. En cuanto a la gravedad de la lesión la mayoría fueron Grado II de Quebec (87%).
8. En nuestra casuística el porcentaje de lesiones graves (fracturas y luxaciones cervicales) ha sido baja (2 casos).

INTOXICACIÓN POR METANOL SIN ACIDOSIS METABÓLICA: A PROPÓSITO DE UN CASO

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Introducción: La intoxicación por metanol es infrecuente, aparece de forma epidémica (sustituto de etanol en licores) y aislada (alcoholicos crónicos y autolisis). Presenta una mortalidad elevada (mayor del 50%) con ingestas de pequeñas cantidades 15-30 ml. El metanol es un producto atóxico que necesita de alcohol-DH (formaldehido) y aldehido-DH (ac. Fórmico) dando lugar a metabolitos tóxicos, existiendo un periodo de latencia hasta el inicio de los síntomas (prolongándose en coingesta con etanol). Caso clínico: Paciente de 36 años operario de laboratorio de conservera en tto con IRS por depresión. Refiere ingesta de 50 ml de metanol hace aproximadamente 60-90 min. Remitido a nuestro hospital por familia sin sintomatología alguna, con llanto fácil y quejido continuos. A la exploración física: fétor enólico, FC 60pm; eupnéico; TA: 120/63; Alerta y colaborador; ACP: normal; abdomen y extremidades normales y Exploración neurológica completa normal, sin focalidad. Pruebas complementarias: hemograma y bioquímica normales; GAP: pH: 7.38; PaO2: 89; PaCO2: 38; HCO3: 24; Omol: 340 (calculada 289). Se decide comenzar perfusión de etanol al 10% (por vía venosa central) y remitir el paciente a centro de referencia (100Km) para comenzar tto con hemodiálisis. A las 5 horas y, tras procesado de muestra, metalonemia de 1.8 g/L (mortal), persistiendo normalidad ácido-base. Discusión: 1- El diagnóstico de Intoxicación se realiza por datos clinicos y de laboratorio (acidosis metabólica o acidosis de hiato doble) 2- Necesidad de tto agresivo aun en ausencia de sintomatología; Infusión de etanol y hemodiálisis (resto de medidas poco útiles) 3- La metalonemia en sangre no indica el tto sino que califica la gravedad de la intoxicación. 4- Sin tto precoz de etanol (menor de 120min) ¿hubiéramos observado acidosis? ¿Es éste el intervalo útil?

THE OUT OF HOSPITAL EMERGENCY TEAMS. ACTUAL MODEL IN ANDALUSIA (SPAIN)

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Even though the first Mobile Intensive Care Units were created in Belfast in 1966, it was not until the 90' s that out-of -hospital emergency teams became common. The Spanish model of out-of-hospital emergency care is based on 3 aspects: - Three figure telephone number - Co-ordination Centres - Out-of -Hospital doctors Although Spain has a three-digit number for contacting the Emergency Co-ordination Centres (ECC) , the number is not the same in all parts of Spain. The Council of European Communities is implanting at the moment, in the whole of Spain, the number 112 which is the number to be used in all of Europe. This number inte-

grates all emergency services (police, fire, civil protection, ECC etc.). The most common model for out of hospital emergency care in Spain is that of the out of hospital doctor. All models have a common characteristic that is the presence of a doctor both in the ECC and in the Emergency Teams. Regarding the make up of the Emergency Teams (an Emergency Team being a team of health professionals and non-health professionals that make up the personnel of an advanced life support (ALS) ambulance that attends emergency situations) there is no one format, although the most common is that of a 3-person team made up of doctor specialised in emergencies, a Nurse specialised in emergencies, and an Emergency Medical Technician (EMT). Andalusia is a region in the South of Spain with more than 9,000,000 citizens. It is divided in eight provinces (Almería, Cádiz, Córdoba, Granada, Huelva, Jaén, Málaga and Sevilla). Looking now at the model in Andalusia; the Health Ministry of the Andalusian government created in 1994 the "Empresa Publica de Emergencias Sanitarias-EPES" (Public Service Company for Medical Emergencies), thus taking charge of setting up 061 emergency teams in the whole of the self-governing region of Andalusia. In some provinces this model co-exists alongside some private medical emergency companies.

LA EFICACIA DEL USO DE OCREOTIDE COMPARADO CON SONDA DE BALONES SENGSTAKEN-BLAKEMORE ENE. TRATAMIENTO DE PACIENTES CON SANGRADO DE TUBO DIGESTIVO ALTO SECUNDARIO A VARICES ESOFAGICAS

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El sangrado de tubo digestivo alto secundario a varices esofágicas en nuestro medio es causa frecuente de ingreso a nuestros servicios de urgencias, De los pacientes con Sangrado de Tubo Digestivo Alto por varices esofágicas y presentan cirrosis tienen el 50% de probabilidades de resangrado, tienen una prevalencia en el sexo masculino 2-1. Se atendieron 40 pacientes, 25 hombres y 15 mujeres, se hicieron dos grupos, grupo 1 Tratamiento con ocreotide 14 hombres y 7 mujeres, y en el grupo II, tratamiento con sonda de balones 11 hombres y 8 mujeres, el rango de edad fue entre 37 a 97 años, con edad promedio de 60 años. De los pacientes atendidos en nuestro estudio, presentaron inestabilidad hemodinámica en la primera hora del grupo 1 11 pacientes, y del grupo ll 16 pacientes. Pacientes que tardaron en controlar el sangrado menos de 3 horas, del grupo 1, 19 pacientes, del grupo ll, 11 pacientes. Pacientes que tardaron en controlar el sangrado mas de 3 horas fueron, del grupo 1, 2 pacientes, del grupo ll, 6 pacientes, Los resultados fueron los siguientes, R:0.79 (IC:0.52-1.20), Chi-cuadrada: 0.95, valor de P, 0,32 los cuales no tienen un valor significativo estadísticamente. Pacientes que sangraron al tercer día, grupo 1 2 paciente, grupo ll, 6 pacientes, Pacientes que sangraron al quinto día grupo 1 cero, grupo ll, 2 pacientes, Ningún paciente presento sangrado a los 15 días de su inicio de tratamiento al estudio. Tiempo promedio de estancia en el servicio de medicina interna fue de 8 días, todos los paciente presentaron datos de insuficiencia hepática y se clasificaron en Child A, 16 pacientes, Child B 16 pacientes y Child C 4 pacientes. Los resultados de endoscopia en los 40 pacientes fueron de acuerdo a la clasificación de Sheila-Sherlof:, grado 1, 12 paciente, grado 2, 14 pacientes grado 3, 10 pacientes, grado 4, 4 pacientes. El estudio se realizo en las primeras 24 a 72 horas de ingreso del paciente. Se presentaron 3 defunciones dos de ellas ene. Servicio de urgencias, ambos del grupo 1, tratamiento con ocreotide ambos tenían grado 4 de varices esofágicas, grado 4 de clasificación de la hemorragia. La tercer defunción perteneció al grupo 1 tratamiento con sonda de balones, y falleció al tercer día en el servicio de urgencias, con diagnostico de síndrome hepato renal, y resangrado de tubo digestivo alto. Tratamiento para el grupo l: Ocreotide 50 mcgr en bolo, posteriormente, 50 mcgr por hora en infusión por 5 dias Grupo II. Sonda de balones Sengstaken-Blakemore. Conclusiones: Pacientes grupo 1, tratamiento con ocreotide, en la primera hora disminuyo el sangrado y se controlo su estabilidad hemodinámica antes de las tres horas. Pacientes grupo II, tratados con sonda de balones, observamos mayor sangrado e inestabilidad hemodinámica en las primeras 3 horas de ingreso. Demostramos que el uso de ocreotide: 1.- En la primera hora disminuyo el sangrado, 2.- Es eficaz en el control de hemorragia aguda de tubo digestivo alto por varices esofágicas sin causar toxicidad, 3.-Se controlo el sangrado en las primeras 24 horas de ingreso.

TRANSFER IN HELICOPTER WITH INTRA AORTIC BALLOON COUNTERPULSATION

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Introduction and objectives: Every day is more frequently in a service of sanitary helicopters the requests for movements of critical patients that carries technology, complicated or of great volume, essential for their survival, because of the time of movement of these patients should be the shortest. The objective of this review is to verify that the B.C.I.A can be transferred in helicopter for weight and measurements, does not alter his functioning because of the height, interferences with the avinica, sensibility to the vibrations and compatibility of the battery. It is necessary to assure that the patient will support during the transport a suitable level of care. Methods: Two cases are checked of retrospective form, they were moved in helicopter model Dauphine, both patients carrying Intra-aortic Balloon Counterpulsation, one from Santiago and another one from Vigo. We have revised the indications and contraindications of the above mentioned device, the weight, type of battery, complications, the pathologie of the patients transferred and the distance from the hospital transmitter to the receiver (time of transfer). In both cases the hospital of destiny was Juan Canalejo of A Corua, the motive of transfer was that both patients were entering program of cardiac transplant for cardiogenic shock after coronary isquemia. Results: The size and weight of the console did not suppose a problem because of the characteristics of the helicopter used in both movements. Interferences were not produced with the instruments of flight and met affected neither by the vibrations nor the variations of pressure. The purge of the ball was produced in two occasions without problems. In one of the devices the battery ends before concluding the transfer for not being in good conditions of maintenance. Both patients were kept stable during the time that lasted the transfer. Conclusions: The transfers of patients with this type of electromedical device is possible and sure in a type medium helicopter, with the limitations of space that this generates, they tolerate well the vibrations and don't alter the instruments of flight. It is necessary to have always clear that it is necessary to to know the duration of the battery and insure that the device has been con-

nected to the current up to the moment of the transport, the personnel of transport will know the managing of the device. There must be a rapid guide of use. To have current to 220V in the airship would expand the possibilities.

DEATH AT THE EMERGENCY DEPARTMENT: ARE WE READY?

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Death's incidence at an Emergency Department (ED) ranges from 0.3 to 2% according to studied data. There are a few worldwide given references about features of patients dying in our ED. Objective: To describe the mortality pattern in our ED and to determine its surrounding circumstances. Methods: Design: A retrospective descriptive study. Setting: Hospital Sant Pau´s Emergency Department, Barcelona (Spain). Study population: All patients dying at our ED from January 1, 2002 through February 19, 2002. Data base: By means of a pre-made questionnaire we have collected basic information about the patients: Demographic data including age, gender, means of access to the ED and if the patient had been evaluated by a physician before entering our ED. To aid our objective: the presence of comorbid conditions, the Charlson and Barthel indexes and the final clinical diagnosis were registered and taken into account. For the terminal ill patients, we have been analyzing if they were, either treated through an ambulatory care program, or included in the list of patients for the Palliative Care Unit. Then we registered the medical treatment adopted, differentiating between the active treatment, the symptomatic treatment (maintenance of the therapeutic measures and control symptoms measures) and the palliative treatment (stopped active treatment and the control symptoms therapy). For the palliative treatment, we have analyzed if the decision to stop treatment has been taken by one or more physicians and if the family was previously consulted. Finally, in the case of casualties we had to define the total length of the patient's stay at the ED as well as if they suffered an expected death (patients with a terminal illness) or an unexpected one (patients without a previous known illness). Results. Throughout the study period, 11.161 emergencies were attended in our ED with an average of 223 cases (entrances) per day. Seventy patients (0,62%) of these episodes died in the ED. Seventy three percent (73%)of these patients were transferred to the 061 service, after being evaluated by a physician in the 74% of the cases. The most prevalent clinical diagnosis was Acute Respiratory Insufficiency (27%), Disseminated Cancer (13%) and Brain Stroke (11%). In 60% of the cases, patients were accompanied by relatives until the moment of death. Seventy percent (70%) of these casualties were expected. The length of their stay at the ED was of approximately 13 hours (+17 h), with an average of 6 hours. Conclusions: 1. Most of the dead cases in our ED were expected. 2. We detected a lack of homogeneity in the final therapeutic decision. 3. The results show an urgent need of an adequate place to be able to provide patients and their families with a better service.

VENOUS AIR EMBOLISM

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Introduction: Venous air embolism is an infrequent ocurrence that may be an iatrogenic complication of invasive procedures or may result from accidental trauma. Air also can be injected through a catheter into a peripheral vein or infused inadvertently, although this ocurrence is infrequently reported. Clinical recognition is difficult because air embolism mimics other acute cardiopulmonary or cerebrovascular events and documenting intravascular gas while patients are alive can be extremely difficult. Case Report: A 80-year-old woman with a history of diabetes mellitus, COPD and atrial fibrillation scheduled at the Radiology Department to undergo computerized tomography (CT) scan of the chest because of atelectasy on inferior right lobe. When contrast was injected the patient suffered hemodynamic collapse and became unconscious. On the clinical examination at the radiology room she was cyanotic and confused with GCS of 9, signs of hypoperfusion, cold sweat, and tachypnea. Blood systolic pressure was 100 mmHg. The neurological exam revealed right hemiparesis. Oxygen saturation fell down to 84% and supplementary oxygen therapy was started inmediately. The CT scan showed a great bubble of air lodge in the pulmonary artery and the presence of gas inside the right cardiac chambers.(Photographs 1 and 2) On admission to the Emergency Department (ED) the patient continued pale and cold and the reevaluation showed tachypnea (RR 24 bpm), blood pressure 120/80 mmHg, and heart rate 120 bpm. Chest examination revealed hipoventilation on left hemithorax and gallop rithm. Arterial blood gases with supplementary oxygen by facemask (FiO2 0,5): ph 7,41, pCO2 37 mmHg, pO2 65 mmHg, Co3H 23 mEq/L, %Sat O2 92%. The ECG showed atrial fibrillation (100 bpm) with negative T on left derivations, and ST-segment depression on DI, DII, y DIII and avL. The chest x-ray showed cardiomegaly and pulmonary oedema. The patient was treated with oxygen therapy, suerotherapy, diuretics, Trendelenburg and left lateral decubitus position. A CT cerebral scan performed didn't showed any lesion. Her neurological status was normal in a few hours and finally she was admited to ICU in stable condition. Resuscitation and inotropic drugs were not necessary and she was discharged in a few days. Conclusion: The most important phyisiological effects of the entry of air inside the venous circulation are sudden elevation of pulmonary artery pressures and right ventricular failure, causing mechanical obstruction and vasospasm. The degreee of physiological impairment depends on the volume of air entering venous system and the speed with which it enters. The capacity of the lung to filter microbubbles of air from the venous circulation is exceeded when the air enters the circulatory system at a rate greater than 0.30 mL/kg per minute. It is estimated that between 300-500 mL of air or gas introduced at 100mL/seg is letal for human being. In this case 100 mL of air was injected inadvertently twice with 120 mL of contrast with a speed of 4 mL/seg. This circunstance was enough to cause venous air embolism that we could confirmed on CT scan.

TRANSPORTE INTERHOSPITALARIO NEONATAL

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Emergencias, Osakidetza,Servicio, Vasco De Salud

Objetivo: Analizar la actividad de Transporte Interhospitalario Neonatal (TIN) en el 2002 en la Comunidad Autónoma de Euskadi. Realizar un estudio de esta actividad con cada recurso, y revisar los procedimientos de asignación, áreas de cobertura, y las necesidades materiales para dar una respuesta más eficaz y eficiente. Revisar el registro de este tipo en los Centros de Coordinación (CC) Metodo: Análisis retrospectivo descriptivo de las actuaciones recogidas como TIN (143) durante el 2002. Revisión de la Dotación de medios: Incubadora de Transporte y calor, ventiladores, monitores Resultados: Las Ambulancias Medicalizadas (9) realizan actividad primaria y Transporte Interhospitalario. Una se encuentra localizada y se dedica prácticamente en exclusiva a Transporte Interhospitalario(E102).Es el recurso que realiza la mayor parte de los TIN interterritoriales. De los 143 registros analizados, no siempre se cumplimentan todos los campos estipulados y faltan campos cuya explotación aportaría información muy valiosa. La distribución de los TIN en los meses del año es homogénea aunque es llamativa la bajada de este tipo de actividad en febrero y agosto. La distribución por días es homogénea. La distribución por horas depende del tipo de Hospital que solicita el Transporte. Las peticiones de los primarios es homogénea a lo largo de todo el día, en los secundarios las peticiones tienden a concentrarse entre las 09 y las 20 horas. La agrupación de motivos de TIN por aparatos ofrece los siguientes resultados: apto. respiratorio (24,5%), apto. cardiovascular (18,9%), apto. digestivo (18,2), prematuidad-bajo peso(9,1%),etc.). Los tiempos de respuesta se incrementan por la necesidad de recoger material necesario (incubadora) para el Transporte en Bilbao o Mendaro. Conclusiones: Las demandas de TIN vienen caracterizadas por el tipo de Hospital(primario, secundario o terciario) que las realiza, el destino viene condicionado por el tipo de patología. La respuesta a la demanda a los hospitales viene condicionada por el tipo de patología, por los medios necesarios para el transporte y de la ubicación de dichos recursos. Hay que revisar los registros de los CC, a fin de que aporten una mayor y mejor información. Hay que dotar de más material de Transporte a los diferentes recursos, para mejorar la respuesta.

EPILEPTIC SEIZURES IN EMERGENCY DEPARTMENT: MULTIVARIATE ANALYSIS

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Objective: We sought to analyze patients who attended the emergency department (ED) after having epileptic seizures (ES) to evaluate the differences, clinical features and tests performed to establish the admission criteria. Methods: We reviewed the patients´ records from people attended at the ED because of ES during six months, from September 2002 to February 2003. Statistical analysis: Chi-square and t-student were applied. A multivariate logistic regression analysis was performed to build a predictive pattern as a tool to distribute the patients into two groups (group A: inpatients, group B: outpatients). Results: Patients evaluated: 108 (group A: 51, group B: 57). Mean age: 49.9+/-19.0 years in group A and 45.4+/-21.1 in group B (no Statistical Difference-SD). In group A, 52.9% reported a history of epileptic disease and 64.9% in group B (no SD). In group A, 14 patients (27.5%) suffered a partial seizures and in group B, 6 patients (10.5%) (SD p=0.024). Epileptic abnormalities on EEG were recorded in 25 patients (49%) in group A, and 3 (5.3%) in group B (SD p<0.0001). In group A, 23 patients (45.1%) showed pathological findings in the neuroimaging (NI) studies and 9 (15.8%) in group B (SD p=0.001). The number of seizures were 1.98+/-1.49 in group A and 1.26+/-0.61 in group B (SD p=0.02). Furthermore, in the multivariate analysis we obtained the consequent formula: Logit= -0.759 + 2.852 EEG - (0.355 + 2.526 antecedent) NI –0.927 antecedent + 0.12 age + 0.325 number of seizures – 0.905 type of seizures. Conclusion: Abnormalities in the EEG or in NI were the most influential factors in deciding the need for admission of the patients attended at the ED.

FORMACIÓN DE TÉCNICOS DE TRANSPORTE SANITARIO EN UN SERVICIO DE EMERGENCIAS

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La puesta en marcha de una unidad móvil de emergencias (UME) supone un reto para los profesionales que en ella trabajan. En la UME de Almansa los conductores y técnicos de transporte sanitario (TTS) son conductores de ambulancia convencional con formación en primeros auxilios y título de conductorcamillero.Por ello se decidió organizar un taller de formación. Objetivos: Favorecer el trabajo en equipo en la UME de Almansa con la adquisición de conocimientos sobre:decálogo de actuación prehospitalaria, funciones dentro del equipo, fisiopatología del transporte, material sanitario y de electromedicina, técnicas de inmovilización, molvilización , de soporte vital básico y de enfermería. Material Y Método: Se impartieron 20 horas lectivas eminentemente prácticas, centradas en las claves del transporte prehospitalario y la descripción del material de la UME. Se repartió un dossier elaborado por el personal sanitario que sirvió de base para el seguimiento del taller. Se trataron 5 áreas: transporte sanitario, soporte vital básico, reconocimiento de material, técnicas de enfermería y de inmovilizción y movilización de pacientes. Se realizón un test de valoración de conocimientos al inicio y al final del taller, y se pasó una encuesta de valoración del mismo. Resultados: Test de valoración de conocimientos previos: 33.33% <5puntos sobre 10;50% entre 5 y 7puntos y 16.66% >7 puntos. Test de valoración de conocimientos final: 91.66% >5puntos, de los cuales 90.90% >7puntos.Encuesta de evaluación del taller:90% >4puntos sobre 5 Conclusiones: Ha habido un buen grado de aprendizaje y aprovechamiento del taller. El taller ha influido de forma positiva en el trabajo en equipo. Alto nivel de satisfacción entre los alumnos con demanda de más formación y más horas. Experiencia positiva recomendable a otras Unidades de emergencia.

SIMULACRO: ACCIDENTE FERROVIARIO CON MÚLTIPLES VÍCTIMAS

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Introducción: La respuesta a una emergencia suele estar planificada; no obstante, ello no garantiza la respuesta prevista. Por ello, y sabiendo que se necesita la participación coordinada de muchos organismos, es importante realizar ejercicios prácticos conjuntos. Exponemos un simulacro de accidente ferroviario de múltiples víctimas que se hizo en Noviembre de 2001 en la Estación de Almansa(España). Objetivos: Practicar y analizar la coordinación entre los distintos organismos. Favorecer el conocimiento y trabajo en equipo. Analizar la capacidad de respuesta de cada colectivo. Favorecer el entrenamiento en la resolución de estos incidentes. Valorar el plan de emergencias interno de RENFE. Material y Método: Organismos participantes:RENFE, Cuerpos de Seguridad, de Rescate, Sanitarios, de voluntarios, Autodiades judiciales y gubernamentales.Recursos materiales:1 malla de comunicaciones, 1 Hospital de campaña, 15 vehiculos, 1 Centro Coordinador de Urgencias, 5 hospitales. Recursos humanos:unos 200 profesionales y voluntarios.Operativa:Alerta:cada cuerpo en su base.Alarma y activación:El jefe de estación da la alarma y se activan los distintos cuerpos de intervención.Aproximación, aislamiento y control:zonificación y creación del puesto de mando avanzado.Triaje y Soporte vital: salvamento, noria de rescate y clasificación de vícitmas.Estabilización y transporte:soporte vital y noria de evacuación.Transferencia y reactivación:Tras evacuar úlitma víctima, se repliega el personal y material. Resultados: 60 accidentados, triaje:3rojos, 7amarillos, 24verdes, 2negros y 24ilesos. Tiempos de respuesta:5 min. Cuerpo seguridad,10 min Cuerpos rescate, 18 min Cuerpo sanitario, 30 min zonificado y Puesto de mando avanzado, 100 min resolución. Zonificación: salvamento, socorro (triage y hospital campaña)y base (PUMA, ilesos, familiares, prensa). Malla de comunicaciones. Conclusiones: En el juicio crítico se detectaron aspectos a mejorar, aunque los objetivos se cumplieron.

USEFULNESS OF A QUALITY OF CARE FORM AS A CONTROL TOOL OF MORTALITY IN A MEDICAL EMERGENCY DEPARTMENT OF A TEACHING HOSPITAL

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Objective: To assess the process of care for patients who died in the medical area of the emergency department of an acute-care teaching hospital in Barcelona, Spain. Methods: Retrospective study of mortality in the emergency department during the year 2002 excluding medical specialties. All physicians who fulfilled a death certificate during the study period were requested to complete an assessment form regarding the care received by the patient in respect to clinical, diagnostic, and therapeutic aspects, which was ultimately analyzed by an independent reviewer. Results: 1.- Epidemiological data: the number of visits attended at the emergency department was 82,698 and the number of medical visits 26,469. A total of 140 patients died (mortality rate 0.5%). Of these 140 patients, 51.4% were men. The mean age was 76.4„b15.3 years and the mean length of stay 1.99„b1.6 days. Senile dementia occurred in 32.9% of cases. 2.- Assessment of the clinical process: main diagnoses included respiratory tract infection (31.4%), progression of an oncological disease (12.1%), biventricular heart failure (10.7%), and septic shock (7.1%). Final causes of death were respiratory failure (40.7%), multiorgan failure (17.9%), and terminal illness (12.9%). In 9.3% of patients, the cause of death was unknown. Unexpected death accounted for 22% of cases. 3.- Assessment of the diagnostic process: the process of care was not in accordance with the protocol established in 1.4% of cases, there was a delay in radiological studies in 1.4%, and inconsistencies between the initial diagnosis and the suspected cause of death in 12.1%. Clinical autopsies were asked for in only 5.7% of cases. 4.- Assessment of the therapeutic approach: a total of 0.7% therapeutic errors occurred, 2.1% of drug-related adverse effects, and it was decided to limit the therapeutic effort in 9.3%. Conclusions: - Self-criticism of the process of the patients¡¦ care in the daily practice contributes to improve scientific knowledge and professional expertise. - Measures to take for improving clinical care include the review of inadequate intrahospital processes, assessment of diagnostic/therapeutic errors in clinical sessions of the service and/or by a committee on mortality, review of cases in which protocols were not followed, increase in the number of clinical autopsies, and improvement of professional training regarding indication of the limitation of therapeutic effort.

INFORMED CONSENT: OPINIONS OF THE HEALTH CARE PERSONNEL FROM A TEACHING HOSPITAL

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Objective: To perform study of the ethical aspects of the opinions of the health care personnel on the information given to patients in order to obtain informed consent. Methods: A total of 277 participants fulfilled an anonymous questionnaire of 20 items. The degree of knowledge of legal health care regulations on the patient's informed consent was assessed. Results: 1.- Sample description: The most frequent age group was 25-34 years (42.2%). A total of 54.2 % of subjects were physicians, 31% registered nurses, 10.5% assistants/technicians, and 4.3% other occupations. With regard to years of practice, 32.1% had been practicing for 1-5 years, 22.4% for > 20 years, 19.5% for 11-15 years, 14.4% for 6-10 years, 8.7% for 16-20 years (not stated in 2.9%). Specialties of the participants included medical in 40.8% of cases, critical care (ICU and anesthesia) in 30.3%, surgical in 13.7%, and other in 15.2%. A total of 32.9% of participants had attended bioethical courses. 2.- Response to the survey: 45.1% of health care professionals believed that they had insufficient information on informed consent and when it should be completed. Four fundamental aspects should be included: information (96.7%), comprehension (93.5%), willingness (84.1%), and competence (74%). Other considerations included that informed consent is an instrument of professional protection against demands of the part of the user (81.2%), of difficult reading for the average person (76.2%), that information is

not clearly explained to the patient (62.8%), and that sometimes contains excessive information (37.9%). Participants believed that side effects of a diagnostic or therapeutic intervention should be specified (98.9%), without percentages (59.6%), as well the likelihood of success (57%) and alternatives (79.8%). In respect to procedures for which informed consent should be included were only some non-invasive diagnostic maneuvers (lumbar puncture, 69.3% or thoracentesis 63.2%), all invasive procedures except for insertion of a central intravenous line (49.8%), all therapeutic interventions, and diagnostic/therapeutic interventions of questionable effectiveness (52%). Conclusions: - A large percentage of health care professionals were unaware of what informed consent is, its different parts, the law that regulates it, and the philosophy under the instrument was developed. - Opinions were plural and many times, paternalistic. - In order to solve the problem of the lack of knowledge of informed consent, continuing education promoted by the ethical committees is urgently need to attain a change of the traditional paternalistic model to an autonomic model of respect to the freedom and individuality of each patient.

RESULTS OF THE EDUCATIONAL PLAN FOR THE IMPLANTACION OF AN AUTOMATICAL EXTERNAL DEFIBRILATION (AED) PROGRAM IN GALICIA

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Objectives: During last years initiatives of emergency services of the autonomous communities for the implantation of systems able to revert the situations of sudden death due to ventricular fibrillation and ventricular tachycardia without pulse. These two arrhythmias suppose 75% of the causes of death in the patients with acute coronary syndrome and its only effective treatment is the defibrillation. We present the model chosen in Galicia for the formation of the groups implied and its results after the implantation of two phases of AED. Methods: The systematics used by the PEHF-061 for the implantation of a program of AED in all the ambulances of the network of urgent sanitary transport (RTSU) of the Galician community is described. For it one has formed to the technicians in sanitary transport (TTS) of the RTSU with resuscitation courses to cardiopulmonary basic-AED that according to decree 251/2000 of 5 of October must make and surpass a course of 9 hours with theoretical and practical examination as well as an obligatory annual recycling. Results: It was begun forming the teachers with a total of 99 for all the community. During year 2000 286 TTS in 14 courses formed. Year 2001 had 400 students distributed in 23 editions. For external personnel to the ambulances of the RTSU 14 courses with a total of 238 students were distributed. In the past year 28 courses with 444 TTS were made. At the moment we were in phase of recyclings with 48 made editions and 685 students who have surpassed in the 99,5% of the cases this recycling of satisfactory way. The total of registered TTS was of 1130, with 985 apt ones (87.16%), 97 not presented/displayed conditions and 48. Conclusions: The implantation of a AED program must be based on the TTS with adapted information to primary care professionals. The formation in AED with a program of 9 hours eminently practical and an annual recycling of 4 hours has been tremendously effective with a 95% of success of the educational plan.

RESULTS OF THE INTRODUCTION OF AN AUTOMATICAL EXTERNAL DEFIBRILATION (AED) PROGRAM FOR EMERGENCY MEDICAL TECHNICIANS (EMT) IN GALICIA

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Objectives: We describe the plan and development of a programme for the introduction AED for EMTs and to show the results of the first months of activity in an eminently rural community. Methods: Exposition of the plan selected for introduction including aspects of logistics, training and control. We examined cardiorespiratory arrests, which were treated in basic life support ambulances equipped with AEDs, from 1 of March to 31 of December 2001. Results: Our country has a complete pioneering legislation. Currently, there are 58 AEDs in operation and 27 are planned for immediate introduction. 967 EMTs have been trained, 85 % of the total amount in the community. In 100 % of the cases, a thorough control of the quality of the service in which AEDs used was carried out. 12% of the patients, who were victims of sudden cardiac death and are found in ventricular fibrillation (VF), survive and are discharged from hospital. However, the percentage of patients to be found in VF is only around 26%. This translates, on the one hand, into long assistance time intervals (from the call to the arrival on site), but above all, into an important delay from the moment in which circulatory collapse takes place until the emergency service 061 is called, more than 5 minutes in half the cases. Conclusions: The programme followed for the introduction of AEDs in Galicia was adapted to the socio-demographic characteristics of the population and the out-of-hospital emergency assistance model developed, executed and controlled by PEHF-061. The global results of our first 10 months with the AED programme were the expected ones. In general, they are comparable to those published; however, ways of shortening the times from the point of collapse to defibrillation must be found, mainly by training the population and through the extension of AEDs to other communities.

INFLUENCE OF AGE ON CLINICAL COURSE, MANAGEMENT AND MORTALITY OF ACUTE MYOCARDIAL INFARCTION IN SPANISH POPULATION

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Objectives: To assess age-related differences in cardiovascular risk factors, clinical course and management of patients with acute myocardial infarction (AMI) in intensive care (ICU) or coronary care units (CCU). Methods: A retrospective cohort study was conducted of all AMI patients listed in ARIAM register (Analysis of Delay in AMI), a multi-center register in which 119 Spanish hospitals participated. The study period was from January 1995 to January 2001. A univariate analysis was carried out to evaluate differences between various age groups. Multivariate analysis was used to assess whether age was an independent predisposing factor for mortality and

for differences in patient management. Results: 17,761 patients were admitted to the ICUs/CCUs with a diagnosis of AMI. The distribution by ages was: < 55 years, 3,954 patients (22.3%); 55-64 years, 3,593 (22.2%); 65-74 years, 5,924 (33.4%); 75-84 years, 3,686 (20.8%), and >84 years, 604 (3.4%) (P<0.0001); 24.6% of the patients were female, and the relative proportion of females increased with age. There were clear differences in risk factors between the various age groups, with a predominance of tobacco use, elevated cholesterol and family history of heart disease in the younger patients. The incidence of complications including haemorrhagic complications, increased significantly with age. The older age groups had a lower rate of thrombolytic therapy and less use of revascularization procedures. The mortality of the above groups was 2.6, 5.4, 10.7, 17.7 and 25.8%, respectively. Age difference was an independent predictor of mortality and the administration of thrombolysis. Conclusions: The distinct age groups differed in cardiovascular risk factors, management and mortality. Age is a significant independent predictor of mortality and for the administration of thrombolysis in our population.

VENTRICULAR FIBRILLATION IN ACUTE MYOCARDIAL INFARCTION OF SPANISH PATIENTS OF ARIAM DATABASE [ANÀLISIS DEL RETRASO EN EL INFARTO AGUDO DE MIOCARDIO]

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The aim of our study has been to investigate the factors predisposing to primary or secundary ventricular Fibrillation (VF) and the prognosis in Spanish patients with acute myocardial infarction (AMI) during their admission to the intensive care unit (ICU) or the coronary care unit (CCU). Design: A retrospective observational study Setting: the ICUs and CCUs of 119 Spanish hospitals. Patients and Participants: a retrospective cohort study including all the AMI patients listed in the ARIAM registry (Analisis od Delay in AMI), a Spanish multicenter study. The study period was from january 1995 to january 2001. factors associated with the onset of the VF were studied by univariant analisis. Multivariant analisis was used to evaluate the independent factors of the onset of VF and for mortality. 17761 patients with AMI were included in the study. 934 (5.3%) developed VF, primary in 735 patients and secondary in 229 patients. In the multivariate analisis, the variables which continued to show an Association with the development of VF were the Killip and Kimball class, the peak CK, the APACHE II score, age and the time from the onset of symptoms to the initiation of thrombolysis. The mortality in the patients with any VF was 31.8%, 27.8% in the patients with primary VF, and 49.1% in the patients with secondary VF. The development of VF in an independent predective factor of mortality in patients with AMI with a crude OR of 5.12 [4.41 =96 5.95] and an adjusted OR of 2.73 [2.12 =96 3.51]. Conclusions: Despite the considerable improvement in the the treatment of AMI in recent years, the onset of either primary or secondary VF is associated with a very poor prognosis. It is usually accompained by extensive necrosis. Key words: acute myocardial infarction, ventricular Fibrillation, mortality, thrombolysis, cardiac arrest.

REVERSIBLE SEVERE ACUTE MITRAL INSUFFICIENCY DURING AN ACUTE PNEUMONIA

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Objective: To describe an unusual case of pneumococcal pneumonia complicated by completely reversible cardiogenic shock. This complication arose due to the development of a myocardial systolic dysfunction associated with alterations of segmental contractility and the onset of severe mitral insufficiency. Design and setting: Clinical case report. Setting: Intensive care unit of a district hospital. Conclusions: Mitral insufficiency and myocardial dysfunction are recognized complications of severe pneumonia that may affect the prognosis. The complication reported here may represent the failure of an organ in the context of a multiorgan dysfunction secondary to the pneumonia. A further aspect of particular interest is the value of echocardiography carried out in intensive care units in patients with severe shock.

REVERSIBLE MYOCARDIAL DYSFUNCTION, POSSIBLE COMPLICATION IN CRITICALLY ILL PATIENTS WITHOUT HEART DISEASE

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Objective: Reversible myocardial dysfunction (RMD) or myocardial stunning is frequently described in patients with episodes of acute coronary syndrome and has recently been reported in critically ill patients without ischemic heart disease. The present paper aimed to study and describe the possible existence of RMD among critically ill patients in our setting who present without an acute episode or history of cardiovascular disease. Design: Prospective, descriptive study. Setting: The intensive care unit (ICU) of a district hospital. Patients and participants: The study included all patients admitted to the ICU from March 1998 to March 2001 without heart disease or history of heart disease but who presented with RMD associated with the cause of ICU admission. Measurements and Results: Transthoracic and transesophageal echocardiography were carried out to assess left ventricular ejection fraction (LVEF) and any segmental contractility disturbances. These investigations were carried out within 24 hours of admission, during the first week, during the second or third week, after one month and after three to six months. We assessed the electrocardiogram (ECG) on admission and changes over time. Thirty-three patients were included, with a mean age of 61.2±14.3 years. Seven patients died. The initial LVEF was 0.34±0.12 and improved with time. Segmental contractility disturbances were observed in all patients initially and also normalized with time. All patients presented with ECG changes that normalized in line with the echocardiographic changes. Conclusions: In our setting, RMD occurred in critically ill patients without primary heart disease. This syndrome is associated with systolic dysfunction,

segmental contractility disturbances and electrocardiographic changes. Although a worsening of the clinical course may be inferred, the degree of its effect on the prognosis of the primary pathology is unknown. The etiology and pathology of RMD is unknown and it may correspond to a pathophysiological response inherent to the critically ill patient.

PARADOXICAL EFFECT OF SMOKING IN THE SPANISH POPULATION WITH ACUTE MYOCARDIAL INFARCTION OR UNSTABLE ANGINA. RESULTS OF THE ARIAM REGISTER.

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Objectives: The paradoxical effect of smoking after acute myocardial infarction (AMI) is a phenomenon consisting of a reduction in the mortality in smokers compared to non-smokers. However, it is not known whether the benefit of this reduction in mortality is due to smoking itself or to other co-variables. Despite acceptance of the existence of the "smoking paradox" in AMI, it is not known whether a similar phenomenon exists in unstable angina. The objective of this study is to investigate the "smoking paradox" in AMI and in unstable angina, specifically studying whether smoking is an independent prognostic variable. Methods and Results: The study population was selected from the multicenter "ARIAM" register, a register of 29,532 patients diagnosed with unstable angina or AMI. Tobacco smokers were younger, presented with fewer cardiovascular risk factors such as diabetes or hypertension, fewer previous infarcts, a lower Killip and Kimball class and a lower crude and adjusted mortality in AMI (0.774 [0.660 - 0.909] p=0.002). In unstable angina, smokers were younger, with less hypertension or diabetes. In the multivariate analysis, no statistically significant difference was found in mortality. Conclusion: The adjusted mortality of smokers in AMI is lower than in non-smokers. In patients with AMI, tobacco smoking could behave as an independent predictive variable which protects against death. Smokers have a lower mortality in unstable angina, which is not maintained in the multivariate analysis; this difference in mortality could be explained by the other co-variables.

FIBRINOLISIS EN PACIENTES CON INFARTO AGUDO DE MIOCARDIO EN EL SERVICIO DE URGENCIAS HOSPITALARIAS. UN AÑO DE EXPERIENCIA

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Objetivos: Análisis de los resultados de la realización de la fibrinolisis en pacientes con infarto agudo de miocardio (IAM) con elevación del ST, atendidos en el Servicio de Urgencias del Hospital Universitario Virgen de las Nieves de Granada. Pacientes y Metodos: Estudio descriptivo transversal de los 51 pacientes con IAM con elevación del segmento ST atendidos en nuestro Servicio de Urgencias en el periodo mayo de 2002 a junio de 2003, en base a los datos recogidos en el registro nacional RESIM (Registro en EmergenciaS Infarto de Miocardio). Resultados: De nuestro grupo de pacientes el 72% eran varones y el 28% mujeres, con 64,6 años de edad media y peso medio de 80 Kg. El 32% tenían antecedentes de hipertensión arterial, al igual que eran fumadores otro 32%. La diabetes mellitus y la dislipemia estaban presentes, respectivamente, en el 12% de ellos. Tan sólo el 10% no presentaba ningún factor de riesgo cardiovascular. Tenían antecedentes familiares de cardiopatía isquémica el 2%, y padecían previamente la enfermedad el 24% (12% ACTP ó by-pass, 8% angor, 4% IAM). Tras el comienzo de los síntomas, el 60% de los pacientes acudió por sus propios medios hasta urgencias del hospital, y el 40% restante fue trasladado desde otras instancias: el 16% desde su centro de salud, el 12% avisó al servicio de emergencias sanitarias 061, y el12% restante contactó con otros dispositivos del sistema sanitario. El primer electrocardiograma (ECG) se realizó en urgencias hospitalarias en el 78% de los casos, y fue en urgencias hospitalarias donde se administró AAS al 72% y nitroglicerina sublingual al 76%. En el 81% de los enfermos no se canalizó una vía venosa hasta que no llegaron al hospital, y tan sólo el 11% de los enfermos llegaron monitorizados y el 7% habían recibido alguna medicación intravenosa. El análisis de los tiempos muestra una demora media de 97 minutos desde el inicio de los síntomas hasta el contacto con el sistema sanitario, y 75 minutos más desde dicho contacto hasta la llegada al hospital. Desde la llegada al servicio de urgencias y la realización de un ECG median 7 minutos, y 21 minutos más hasta el comienzo de la trombolisis. En total el tiempo medio transcurrido desde el inicio de los síntomas hasta el comienzo de la fibrinolisis es de 159 minutos. Presentaron IAM de localización inferoposterior el 44% de los pacientes, el 32% fue de localización combinada, y el 24% anterolateral, con elevación media del segmento ST de 5,9 mm. Al ingreso en urgencias persitía el dolor torácico en el 92% de los casos, y en cuanto a la situación hemodinámica el 76% presentó un Killip I, frente a un 8%, respectivamente, de Killip II, III y IV. Se clasificó la prioridad para la fibrinolisis en base a la aceptada por los grupos RESIM y ARIAM, siendo prioridad I el 52% y prioridad II el 48%. Se realizó fibrinolisis con TNK (tenecteplasa) al 92% de los pacientes; del 8% no fibrinolisado, la mitad fue por contraindicaciones relativas y la otra mitad por traslado a UCI. El 4% de los pacientes falleció en urgencias. Conclusiones: La mayoría de los pacientes atendidos en nuestro servicio de urgencias por infarto de miocardio acuden directamente al hospital por sus propios medios. De los que reciben asistencia extrahospitalaria a pocos se les realiza ECG, se les canaliza una via venosa, se les monitoriza o se les administra medicación. Los pacientes tardan mas de hora y media en contactar con el sistema sanitario tras comenzar los síntomas. Los tiempos de realización del primer ECG en el hospital y de inicio de la trombolisis están por debajo de 30 minutos en total, siendo el tiempo medio desde que comienza el cuadro clínico hasta que se inicia la fibrinolisis inferior a 3 horas. La asistencia del infarto de miocardio en nuestro servicio de urgencias muestra índices de demora reducidos y scores asistenciales adecuados, con alta tasa de fibrinolisis y baja de mortalidad.

CORRELACIÓN CLINICO RADIOLÓGICA DE LA TROMBOSIS VENOSA AGUDA Y LOS FACTORES DE RIESGO. PERFIL DEL PACIENTE EN URGENCIAS DE UN HOSPITAL COMARCAL

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Introducción: La trombosis venosa profunda (TVP) es una de las patologías que producen más morbi-mortalidad en la práctica clínica, debido a su alta asociación con el tromboembolismo pulmonar, que sigue siendo una de las causas de muerte no esperada hospitalaria más frecuente, y una entidad clínica de difícil diagnostico. Objetivos: Describir el perfil del paciente atendido en un servicio de urgencias con sospecha de TVP, factores de riesgo, valores de dimero-D, así como la correlación entre manifestaciones clínicas y resultados obtenidos de las técnicas de imagen. Metodología: Estudio descriptivo retrospectivo de un total de 233 pacientes que fueron atendidos por sospechas clínicas de TVP, en el servicio de urgencias de un hospital comarcal durante el periodo 1 de junio del 2001 al 1 de junio del 2003. Resultados: De los 233 pacientes atendidos con sospecha de TVP en 131 se confirmo el diagnostico mediante estudio ecográfico. De estos el 45,8% fueron mujeres y el 54,2% varones. De los 131 pacientes se selecciono una muestra aleatoria representativa de donde se registraron los factores de riesgo predisponentes para dicha patología, siendo diabéticos el 19,0% el 38,1% hipertensos, fumadores el 19,0%. Con antecedentes de cardiopatía isquemica y arritmias cardiacas el 14,3% t el 4,8% respectivamente, dislipemia el 9,5% y sedentarismo en el 38,1%. De los pacientes diagnosticados de TVP, el dimero-D presento niveles menores a 500 ng/ml en el 14,3%, el 4,8% entre 500 y 1000 ng/ml. De 1001 a 2000 ng/ml el 23,8%, el 14,3% de 2001 a 4000 ng/ml, siendo el mayor porcentaje, el 33,3%, entre 4001 y 6000 ng/ml. En cuanto al tratamiento el 100% se le administro tratamiento anticoagulante y al 9,5% antiagregante. Conclusiones: De los 233 pacientes que ingresaron en el servicio de urgencias solo en el 56,2% se confirmo el diagnostico mediante técnicas de imagen, de ahí la importancia de una buena anamnesis y correcta exploración. El dimero-D es una parámetro muy sensible pero no especifico, aunque conforme aumenta su valor aumenta su utilidad.

INTOXICACIONES AGUDAS POR PLAGUICIDAS: REPERCUSION EN LA UNIDAD DE URGENCIAS DE UN HOSPITAL COMARCAL

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Objetivos: Análisis epidemiológico, clínico, diagnóstico y terapéutico de las intoxicaciones agudas por plaguicidas atendidas en la Unidad de Urgencias del Hospital de Poniente de Almería. Pacientes y Metodos: Estudio descriptivo transversal de los 288 pacientes con intoxicación aguda por plaguicidas atendidos en nuestra Unidad de Urgencias en el periodo 2001 a 2003, en base a los datos recogidos en la historia clínica y en el documento de declaración obligatoria individualizada de intoxicación por plaguicidas. Resultados: De nuestro grupo de pacientes 255 eran varones y tan solo 33 mujeres, con 65 años de edad media y predominio de nacidos en España (56,9%), seguidos de lejos por los de origen marroquí con un 7,6%. El 37,5% fueron trabajadores autónomos, el 63,2% ya había resultado intoxicado previamente en al menos una ocasión, y la inmensa mayoría de las intoxicaciones se produjeron en ambientes cerrados (96,5%), principalmente al fumigar (54,9%). En un 4,9% de los casos la intoxicación fue con fines autolíticos. Los principales tóxicos implicados fueron carbamatos (18,8%) y organofosforados (17%), tratándose de una intoxicación mixta en el 10,8% de los casos. El 17% de los pacientes desconocía absolutamente el producto o productos que había estado manipulando. Las vías principales de contacto con el tóxico fueron la cutánea (49,7%), la inhalatoria (31,3%), la digestiva (8,3%) y la ocular (8%). El 25,7% no usó protección alguna, el 35,1% únicamente mascarilla, el 13,9% guantes, el 3,5% protección ocular y tan sólo el 17,4% traje especial. Del cuadro clínico destacaron síntomas cardiorespiratorios en el 47,9% de los afectados (principalmente disnea, sibilancias, alteraciones de la tensión arterial, broncorrea y bradicardia), síntomas cutaneomucosos en el 30,6% (principalmente diaforesis, irritación de la conjuntiva ocular y prurito y/o eritema cutáneos), síntomas neurológicos en el 18,1% (principalmente mareo, cefalea, temblores, visión borrosa, miosis y alteraciones del nivel de conciencia), y síntomas digestivos en el 16,3% (principalmente nauseas, vómitos, dolor abdominal, sialorrea y diarrea). Los valores de la colinesterasa se alteraron únicamente en el 1,4% de los casos. Requirieron lavado corporal exhaustivo el 30,6% de los pacientes, lavado gástrico el 3,8%, administración de atropina el 16,3% y de oximas el 1,4%. El 1% de los intoxicados fallecieron, y el 3,1% presentó una evolución particularmente desfavorable. Tan sólo el 5,9% requirieron ingreso hospitalario. Conclusiones: En nuestro ámbito geográfico existe una alta incidencia de intoxicaciones agudas por plaguicidas, siendo reincidentes casi dos tercios de los pacientes. Las causas fundamentales de la intoxicación son el uso de estos productos en ambientes cerrados y sin sistemas adecuados de protección corporal, no siendo desdeñable el porcentaje de pacientes que desconocen la naturaleza y riesgos de los productos que manipulan. La mayoría de los casos se resuelven favorablemente en urgencias, con bajas tasas de mortalidad y de ingresos hospitalarios.

PROTOCOLO DE DIAGNOSTICO RADIOLÓGICO EN PACIENTES CON SOSPECHA CLINICA DE TROMBOEMBOLISMO PULMONAR. RESULTADOS DEL PERFIL DE LOS PACIENTES

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Objetivos: Análisis de los resultados de la aplicación del protocolo de estudio de los pacientes con sospecha clínica de tromboembolismo pulmonar agudo (TEPA) atendidos en la Unidad de Urgencias del Hospital de Poniente de Almería. PACIENTES Y Metodos: Estudio descriptivo transversal de los 56 pacientes con sospecha de TEPA atendidos en nuestra

Unidad de Urgencias en el periodo junio 2001 a junio 2003, a los que se aplicó el protocolo establecido a tal efecto y consensuado con el servicio de Radiodiagnóstico. Resultados: De nuestro grupo de pacientes 29 eran varones y 27 mujeres, y en el 44,6% se identificaron una o varias enfermedades concomitantes en el momento de presentar el cuadro clínico sospechoso de TEPA. El 37,5% llevaban una vida sedentaria, al igual que otro 37,5%, que eran hipertensos. El 25% consumían tabaco, el 21,4% presentaban algún tipo de valvulopatía, el 17,9% eran dislipémicos, el 14,3% tenían alguna arritmia de base, el 12,5% padecían diabetes mellitus, y también el 12,5% tenían antecedentes personales de cardiopatía isquémica. De las exploraciones complementarias practicadas el dímero-D fue normal en el 21,4% de los casos y la eco-dopler de miembros inferiores fue negativa en el 33,9%. La radiografía de tórax fue normal en el 17,9% de los pacientes, en el 50% no mostró un patrón patológico definido, mientras que el 14,3% presentó derrame pleural, el 16,1% condensación y el 1,8% oligoemia. La TAC torácica fue normal en el 39,3% de los pacientes y mostró anomalías en el 60,7% restante, con un patrón de afectación de territorio de bronquio principal en el 19,6% de los casos, afectación lobar en el 14,3% y patrón de anomalía en cono en el 7,1%; el 58,9% restante no mostró patrón patológico definido. Se practicó fibrinolisis en el 7,1% de los pacientes, en el 58,9% se instauró tratamiento anticoagulante y en el 16,1% antiagregante. Conclusiones: Los pacientes con sospecha clínica de TEPA presentan altos porcentajes de antecedentes de cardiopatía isquémica y/o factores de riesgo cardiovascular, así como de valvulopatías o arritmias de base. Un elevado porcentaje de pacientes con sospecha clínica de TEPA presenta dímero-D, eco-dopler de miembros inferiores, radiografía de tórax y/o TAC torácica normales. En los casos en los que existen hallazgos radiológicos el patrón más frecuente es el de alteraciones inespecíficas.

EL PACIENTE PEDIÀTRICO QUE ACUDE AL SERVICIO DE URGENCIAS HOSPITALARIO

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INTRODUCCION: Las urgencias pediàtricas constituyen una parte cualitativa y cuantitativamente importante dentro del servicio de urgencias de un hospital marcal, tanto por la variedad de patologìas a atender como por la distinta gravedad que estas entrañan. Su correcto funcionamiento es irrenunciable para asegurar la calidad de la asistencia. OBJETIVOS: Descripciòn del perfil del paciente pediàtrico urgente, cuadros clìnicos, diagnòstico, destino y tratamiento. METODOLOGIA: Estudio descriptivo retrospectivo de una muestra aleatoria constituida por los 2000 pacientes pediàtricos atendidos en el servicio de urgencias de un hospital comarcal durante un periodo de 5 semanas. RESULTADOS: El 82,7% de los pacientes acudiò por propia iniciativa frente al 17,3% que lo hizo derivado desde atenciòn primaria. El 90,3% de los niños eran de origen español, y los restantes inmigrantes. El 33,8% de los pacientes acudiò durante el turno de mañana, el 47,8% por la tarde y el 18,3% a lo largo de la noche. Del total de pacientes atendidos sòlo el 8,5% requiriò valoraciòn por el pediatra de guardia, mientras que el 91,5% restante fue resuelto por el mèdico de urgencias. El 99,4% de los niños fueron atendidos inicialmente en el àrea de policlìnica (consultas), y sòlo el 0,6% en la sala de emergencias. El 55,9% fueron varones, siendo el grupo de edad màs numeroso el de 1 a 2 años (18,35%). El motivo de consulta mayoritario fue mèdico (81,3%) frente al 18,7% de procesos quirùrgicos o traumatològicos, destacando el sìndrome febril (26,6%), las afecciones abdominales (18,6%) y los traumatismos menores (14,5%). Tras ser atendidos por el mèdico de urgencias el 18,2% de los niños fueron dados directamente de alta, el 68,9% pasò a la sala de espera y el resto (12,9%) ingresò en el àrea de observaciòn. Se pidieron pruebas complementarias sòlo al 49,3% de los pacientes, predominando las radiografias y el anàlisis de orina. El tiempo de estancia en urgencias fue menor de 1 hora en el 43,7% de los casos, y de 1 a 3 horas en el 43,5%. Los fàrmacos màs empleados fueron los analgèsicos-antitèrmicos (60,6%), sòlo el 3,9% requiriò tratamiento intravenoso y menos del 10% cirugìa o tratamiento ortopèdico. El 92,5% de los niños atendidos por el mèdico de urgencias se fue de alta a su domicilio, siendo derivados los restantes a consultas externas de diferentes especialidades. De los niños atendidos por el pediatra de guardia el 31,6 se fue de alta a su domicilio, el 45,3% fueron ingresados en planta y el 11,1% pasò a la sala de observaciòn de urgencias. 2 niños fallecieron en la sala de emergencias (0,1%). CONCLUSIONES: La gran mayorìa de las urgencias pediàtricas hospitalarias se producen por iniciativa de la familia, predominando las afecciones mèdicas, la consulta en horario de tarde y la edad menor de 2 años. Sòlo un mìnimo porcentaje de pacientes requiere el concurso del pediatra de guardia, siendo resueltos 9 de cada 10 pacientes por el mèdico de urgencias, con una elevada tasa de altas a domicilio, con escaso empleo de exploraciones complementarias, con mìnimos tratamientos por vìa venosa y con tiempos de estancia mayoritariamente inferiores a 3 horas. Casi la mitad de los niños por los que se consultò al pediatra de guardia fueron ingresados en planta.

PAEDIATRIC EMERGENCY AND ITS CHARACTERISTICS AT A RURAL HOSPITAL: WHAT CAN WE DO?

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Objectives: To analyze the characteristics of the pediatric cases attending the Emergency Room at a Rural Hospital. Material and Methods: We used a retrospective, randomized cross-section study consisting of 2000 patients attended during 5 weeks. We analyzed age, origin, cause of consult, clinic, diagnosis, treatment and disposition. Results: Gender: 55.9% were males, 82.7% presented to the hospital emergency room by themselves and didn't consult their doctor, 9.7% were immigrants, and just 8.5% obtained prior advice from the pediatrician. 0.6 % were treated at the critical box. The most common age range was the 1-2 year old group, which comprised 18.35 % of the sample. Reasons for visit included: medical = 81.3 % (26.6% fever, 18.6% abdominal pain), Trauma and surgical = 18.7%. Disposition of the patients included 18.2% discharged once attended, 68.9% were destined to waiting room and 12.9% passed to the Observation area. Complementary tests were ordered in 49.3% consisting of X-Ray and urine test in the majority. The 43.7% were attended to in less than 60 minutes, and 43.5% were attended to in 60 to 180 minutes. 60.6% were treated with a pain killer and/or antipyretic medicine, and 10% required surgery or trauma intervention. The final disposition for 92.5% of cases was discharge. Conclusions: The majority of cases did not go to their doctor at Primary Attention Centres, but consult the

ED for complaints of fever and abdominal pain, reasons that don't need complementary tests and could be managed at Primary Attention Centres. We need to promote health education to the people in our area.

ACUTE PULMONARY THROMBOEMBOLISM AT EMERGENCY ROOM OF RURAL HOSPITAL

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Objectives: To study the incidence of acute pulmonary thromboembolism (APT) at our hospital, its risk factors, diagnosis and the efficacy of Helical Computerized Tomography Scanner (HCTS). Material and Methods: We retrospectively studied all cases attended at the Emergency Room (ER) with clinically suspected APT that were enrolled in an APT protocol (N = 152) during the period June 2001 to June 2003. We examined gender, age, risk factors, D-dimer, conventional X-Ray and HCTS. Results: 36.8% of the 152 patients evaluated for APT based on symptoms were diagnosed with APT. Mean age was 66.9 ± 15.4 years, and 51.7% were males. Risk factors included concomitant illnesses (44.6%), sedentary life (37.5%), hypertension (37.5%), tobacco use (25%), diabetes mellitus (12.5%), and ischemic heart disease (12.5%). Complementary tests included a negative D-dimer (< 500 ng/ml) in 21.4%, and a normal Doppler Color Ultrasound (DCU) in 33.9% of the cases. The conventional X-Ray findings were normal in 17.9%, and showed condensation in 16.1%, pleural effusion in 14.3%. HCTS findings were normal in 39.3%, principal bronchiole in 19.6%, lobular territory in 14.3%, cone in 7.1% and in 59% non defined pattern. Thrombolysis was administered to 7.1% of the cases and anticoagulant therapy in 58.9%. Conclusions: Concomitant illnesses, sedentary life, and hypertension are important risk factors we can modify to reduce the incidence of this lethal illness. An important frequency of diagnostic tests (including D-dimer, X-Ray and DCU) had normal or nonspecific results. The HCTS is the most exact technique in the diagnosis of the thromboembolism pulmonary.

DEEP VENOUS THROMBOSIS, CORRELATION BETWEEN CLINIC AND DOPPLER COLOUR ULTRASOUND

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Objectives: To evaluate the clinical spectrum and evaluation of patients with symptoms of Deep Venous Thrombosis (DVT), and examine risk factors. Material and methods: We analyzed all the patients with symptoms of DVT attended in the emergency department, during the period from June 2001 to June 2003. We performed a retrospective analysis of risk factors, D-dimer and Doppler color ultrasound (DCU) of the affected leg. Results: We included 233 patients; 45.8% female, with a mean age 65.2 ± 18 years. Among these 233 patients with clinically suspected DVT, the diagnosis was confirmed in 56.2%. The risk factors identified were: diabetes mellitus (19%), hypertension (38.1%), tobacco use (19%), ischemic heart disease (14.3%), cardiac arrhythmia (4.8 %), dyslipidemia (9.5%) and sedentary lifestyle (38.1 %). The D-dimer was significantly elevated (>500ng/mL) in 75 %, and < 500 ng/mL in 14.3 % of the cases that had DVT demonstrated by DCU. Therapy was instituted with an anticoagulant in 100% and with AAS or Clopidogrel in 9.5 %. Conclusions: The most common risk factors identified were hypertension and sedentary lifestyle. We can improve prevention of DVT by controlling these risk factors. The D-dimer had an elevated sensitivity but a low specificity in our sample.

ACUTE INTOXICATION BY PESTICIDE AND ITS EPIDEMIOLOGY EXPERIENCE OF EMERGENCY DEPARTMENT IN RURAL HOSPITAL

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Objectives: To study the epidemiology of pesticide intoxication, its clinical manifestations, diagnosis, mortality, and type of poison encountered. Patients and methods: We conducted a Transversal and retrospective study of the 288 patients treated at the emergency room during 2001, 2002, and 2003, using the ER medical history and the statistical sheet of the preventive department according to the indication of Health Service of Junta de Andalucía. Results: 88.5% of cases were men and 11.5% women, with a mean age of 36.9 ± 15.1 years. The majority were Spanish 56.9% or Moroccan 7.6%. 63% had more than one intoxication during the fumigation (54.9%), with autolysis intention 4.9%. Poisons identified included Carbamate (18.8 %), Organofosforated (17%) and more then one poison in 10.8%. In 17% of cases the worker didn't know the nature of the pesticide. In 25.7% of cases, patients reported using no type of protection. Clinical symptoms noted were cardiorespiratory (47.9%), dermatologic (30.6%), neurological (18.1%), and gastrointestinal (16.3%). Therapy included decontamination (30.6%), atropine administration (3.8%), and Oxime administration (1.4%). Death occurred in 1% of cases, and 5.9% required hospitalization. Conclusions: In our area, characterized by intensive agriculture and green houses, the incidence of accidental intoxication of pesticide is high, recurrent, and often associated with the failure to use protective measures. The majority of cases were resolved in the Emergency Room without complication and only a low percentage required hospitalization. We propose that preventive measures are the most effective way to avoid more cases of intoxication and its consequences.

THROMBOLYSIS IN ACUTE MYOCARDIAL INFARCTION PATIENTS IN EMERGENCIES DEPARTMENT. A YEAR OF EXPERIENCE

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Objectives: To analyze the results of thrombolytic administration in acute myocardial infarction with elevation of the ST

(IAM) patients. Patients and Methods: Descriptive study of 51 AMI patients with elevation of the ST segment, attended to in our Service of Urgencies during the period from May 2002 to June 2003, based on data in the national registration RESIM (I Register in Emergencies Infarto agudo de Miocardio). Results: In our sample of 51 patients, 72% were male, with mean age 64.6 years. Antecedent history included arterial hypertension and tobacco use (32%), diabetes mellitus (12%) and dyslipidemia (12%). 10% presented with no history of cardiovascular risk factors. The first electrocardiogram (ECG) was obtained in hospital urgencies in 78% of the cases. Aspirin was administered in hospital urgencies to 72% and sublingual nitroglycerine to 76%. In 81% of the patients an intravenous line was not started until they arrived at the hospital, only 11% of the patients arrived monitored, and 7% had received some intravenous medication. On admission to urgencies, 92% of cases had thoracic pain. 76% presented as Killip I, in front of 8%, respectively, of Killip II, III and IV. The priority for thrombolysis was classified based on the criteria accepted by the groups RESIM and ARIAM. 52% of our patients were priority I, and 48% were priority II. 92% of the patients received thrombolysis with TNK-tpa (tenecteplase). Conclusions: Most of the patients treated in our service of urgencies for AMI go directly to the hospital by their own means. Of those that receive attendance out of-hospital, too few received an ECG, an intravenous line, monitoring or any administered medication. The patients waited about 90 minutes to make contact with the sanitary system after symptom onset.

RHABDOMYOLYSIS IN ACUTE INTOXICATIONS

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Objectives: To determine whether rhabdomyolysis (RM) diagnosis can be a predictive factor of potential severity complications in patients admitted to the Emergency Department (ED),with acute intoxication (AI) and altered state of consciousness. Methods: A prospective study was conduced with patients admitted to our Emergency Department from an urban area due to AI. A descriptive analysis of several variables was performed including age, sex, toxic substances involved, clinical manifestations (basic neurologic examination and Glasgow coma scale), diagnostic, treatment and causes of hospital admission. The blood samples of these patients were analyzed, using a series of serum creatine phosphokinases (CPK) and biochemical detection items during 24 hour. RM was defined by a serum CPK level of more than 170U/ml. Results: A total of 30 cases of AI were attended in ED; 26 male with mean age 35 years and 4 female with mean age 43 years. Leading toxic agents were: alcohol alone (n=9), opioids combined with cocaine (n=4), benzodiazepines (BZD) alone (n=4) and opioids combined with BZD (n=3). More than one drug had been taken in the rest of the cases. Fifteen cases were hospitalized (diagnosis of RM was reported in 14 of these). We also observed four patients with RM induced acute renal failure (ARF) associated with opioids alone or in combination with other drugs (sedatives or stimulants). Conclusions: 1.The development of RM is a significant complication of AI and is the most frequent cause of hospital admission. The serum CPK level was elevated in all of these patients, which is a good marker for RM and an effective way to raise the diagnosis rate and improve the prognosis. 2.Acute renal failure occurs in cases of opioids-associated RM. Clinicians should have a high index of suspicion for RM in patients with acute opioid intoxication but also in other AI, predicting those patients in whom aggressive therapy should be initiated to minimize the complications of RM. Routine serum CPK levels should be checked on patients at risk.

GESTION POR PROCESOS.SEGURO DE CALIDAD

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Objetivo: Una gestión adecuada de un servicio es imprescindible para garantizar una excelente calidad con el menor coste posible. Este hecho es, si cabe, más importante en la atención urgente debido a la gran demanda asistencial existente y al elevado consumo de recursos, directos e indirectos, que origina. El objetivo de este trabajo es describir la experiencia práctica de aplicación en un Servicio de Urgencias Hospitalario de la Gestión por procesos. Método: El proyecto constó de tres fases: análisis, implantación y consolidación. La fase de análisis: formación del equipo de gestión, la definición de las bases estratégicas y operacionales del modelo de gestión que se quería implantar. En la fase de implantación: selección de los responsables o propietarios de los procesos, el entrenamiento de estos responsables, la identificación de las áreas de mejora a partir de la obtención de resultados de los indicadores analizados. En la fase de consolidación se formó a los responsables de los procesos, y se puso en marcha un sistema de seguimiento que permitiera evaluar los resultados obtenidos. Resultados: El cronograma de actuaciones y los resultados obtenidos fueron los siguientes:1º Definieron los criterios operacionales dentro de la política y estrategia del servicio.2º Se estableció un decálogo de principios e indicadores de calidad, que comprometía tanto a la dirección del hospital como a los profesionales del servicio de urgencias.3º Posteriormente se elaboró el macroproceso de urgencias, identificando los procesos clave o centinela. 4º Una vez elaborado el macroproceso de urgencias se procedió a la descripción de cada uno de los procesos clave y de los procedimientos que intervienen en cada uno de ellos. Conclusiones: La gestión por procesos debe reevaluarse continuamente, modificando los procesos clave y los procedimientos según se vayan incorporando nuevas funciones, cambios estructurales o se incorporen nuevas tecnologías. La gestión por procesos es una herramienta que puede aplicarse y tiene su utilidad en los Servicios de Urgencias Hospitalarios. En nuestro caso la gestión por proceso facilitó: - Un conocimiento más preciso del funcionamiento del Servicio. - Mejora de la satisfacción de los profesionales y de los ciudadanos. - Impulso a la protocolización. - Incremento de la motivación profesional. - Herramienta de ayuda para el análisis de costes de los procesos clínicos mediante la técnica ABC, al requerir el desglose de actividades.

CRISIS HIPERTENSIVAS: TRATAMIENTO EN URGENCIAS Y SEGUIMIENTO NEFROLÓGICO. ESTUDIO PROSPECTIVO DE 60 PACIENTES

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Objetivo: Evaluación de un protocolo conjunto de manejo y seguimiento de las crisis hipertensivas. Metodología: Estudio prospectivo durante 16 meses, se incluyeron en el estudio todos los pacientes con una urgencia hipertensiva, definida como cifras de presión diastólica (PD) ? 120 mmHg en dos determinaciones, después de 30 minutos en reposo y sin signos de afectación de órganos vitales. Tratamiento en Urgencias (SU) 50 mg de captopril oral. Criterios de ingreso hospitalario: Alteraciones en la analítica básica de urgencias o en la exploración física o reducción insuficiente de la PD dos horas después de la administración del captopril. Se realizó seguimiento de los pacientes en la consulta externa de Nefrología. Resultados: Se recogieron datos de un total de 60 pacientes, 36 varones (60%) y 24 mujeres (40%), con una prevalencia del 0,20% de las urgencias de medicina (29.996) durante el estudio. 21 pacientes (35%) estaban asintomáticos, 10 pacientes (16,7%) no se conocían hipertensos. Realizaban tratamiento farmacológico 35 pacientes (70% de los hipertensos conocidos), con un buen cumplimiento 11 casos (31,42%). Adecuado cumplimiento higiénico-dietético 5 casos (10%). La edad promedio fue de 55 años (32-81), distribución por edades y sexos: edad 31-40 41-50 51-60 61-70 71-80 > 80 varones 4 15 10 4 3 - mujeres 2 4 5 11 1 1 Las presiones promedio al ingreso en urgencias fueron de 215 la sistólica (PS), 128 la PD y 157 la media (PM). La disminución de la presión al alta de urgencias fue, de 17,7% (22,9 mmHg) la PD y 18,10% (28,7 mmHg) la PM. Ingresaron 25 (42,7%) de los pacientes, 5 por no descenso de la tensión arterial (TA), 11 por alteraciones clínico-analíticas y 9 por persistencia de sintomatología. Seguimiento de los pacientes: (51/60, 85%), en la consulta externa de nefrología, la PD media fue de 90,65 ? 10,06 mmHg, disminución respecto a la PD al alta del SU de 14,86 mmHg ? 12,51 mmHg. Hipertrofia septal (grosor > 11 mm) en la Ecocardiografía en 31 casos (81,6%) de 38 estudiados. Estenosis de arteria renal, un caso. Biopsia 3 casos por proteinuria > 2g/dia (dos nefroangioesclerosis, uno cambios mínimos). Conclusiones: Hemos detectado una baja prevalencia de la urgencia hipertensiva. El cumplimiento terapéutico y higiénico-dietético se ha evidenciado muy deficiente. El seguimiento de los pacientes permite la detección de los casos de hipertensión secundaria, detección de nuevos casos y un estudio y un control adecuados de las repercusiones sistémicas.

DO CHILDREN KNOW ABOUT SYNTHESIZED DRUGS?

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Synthesized drugs are substances slightly different in their molecular structure, to those from which they derive, but with the same effects upon the Central Nervous System. Its continuous and ascending leading role is due among other factors to: -The rise in the quantities seized -The circumstances that surround its intake (youth and teenagers) -The generalization of its consumption associated to parties, weekends and celebrations in general -Its relation with spectacular and lethal car accidents in highways (Kamikazes). Aims: 1.-Knowing the rate of information that scholars have about synthesized drugs: -Age of initiation -Intake guidelines -Access to these. 2.-With the facts obtained, establish social sanitary educational strategies, with the result of preventing the intake and abuse of drugs among the infant population. Methods and material: Distribution of surveys in different schools in both rural and urban areas of Zaragoza (Spain) to students with ages between 11 and 16. Results: After analysing 1000 anonymous surveys we can appreciate the following facts: -There are no great differences in relation with the sex of students. -There are no great differences between the answers given by students of urban and rural areas, or of public and private schools. -The fundamental differences are related with the age of the child, due to which prevention strategies should be based on this variable. Conclusions:The extension of intake of synthesized drugs among teenagers, is a matter of concern in nearly every European country. Like in any risk prevention program, information for consumers of any possible toxic effects produced by synthesized drugs, makes us consider as a first aim, is the ideal moment in which such information will result more effective to prevent the initiation in its intake.

CLINICAL CHARACTERISTICS OF MIXED OVERDOSES BY HEROINE AND COCAINE.

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The iv overdose by heroine and cocaine, formerly named "speed-ball", was a very unusual situation in our country. In the last two years there has been an alarming rise in the frequency of this type of overdoses, named "combi" by users, as stated by police and forensic opinions and specially by toxic situations treated in the Emergency Departments (ED). The association produce a potentially misleading clinical picture by expressing the opposite effects of these substances in the CNS and peripheral targets such as the pupils, very relevant under the diagnostic point of view. Objective: To evaluate the clinical characteristics of heroine-cocaine overdoses, complications frequency, treatment and evolution. Methods: We have prospective studied the overdoses associating heroin and cocaine, analytically confirmed, treated in the ED of the Clinical University Hospital of Zaragoza (Spain) in the last two years to verify its main clinical symptoms and signs, complications, treatment and evolution. Total number of acute poisoning in the period has been 1892, number of cases in which heroin was suspected as casual agent 127, number of cases in which cocaine was suspected as causal agent 83 and number of cases in which both substances have been confirmed in urine analysis 30. Results: Males accounted for 93´33% (28) of cases; mean age is 28+/- 5´2 years. Main symptoms are represented as follows: Pupils: miosis 18 cases (60%), midriasis 5 cases (16´66%); Conscious level: GSS</= 5, 8 cases (26´66%), 5 > GSS </=10, 10 cases (33´33%), GSS>10, 12 cases (40%); Respiratory status: Respiratory depression 17 cases (56´66%), O2 saturation < 90% 18 cases (60%), respiratory arrest 6 cases (20%); Cardiac status: hypertension 2 cases (6´6%), synusal tachycardia 15 cases (50%); Agitation 6 cases (6´6%). Main complications are: Bronchoaspiration 5

cases (16´66%) and Rhabdomyolisis 3 cases (10%). Antidotes have been employed in 25 cases (83´33%), Naloxone in 24 and Flumazenil in 6. Intubation has been required in 4 cases (13´33%). RCP has been necessary in 6 cases (20%). There have been two deaths (6´66%) one for cerebral hiposic damage and the other as a sudden death 15 days after admission. Conclusions: The clinical picture observed in heroin-cocaine overdoses shows a higher expression of CNS depression related with opiates, but also the presentation of cocaine related effects such as midriasis, agitation and sinusal tachycardia. It must be stressed that the presentation of agitated coma and midriasis do not exclude the indication of naloxone, especially if a respiratory depression is present.

EVOLUTION OF ANTIDOTIC THERAPY FOR CENTRAL NERVOUS SYSTEM DEPRESSION

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Central Nervous System (CNS) depression is the commonest effect in poisoned patients on arriving in the emergency department. And it has been so since the mid 50´s when the widespread prescription of barbiturates originated the beginning of what it was later to be called the "acute poisoning epidemic". The evolution of the treatment of this clinical situation has been very interesting, showing a very strong relationship with the technical developments in the medical field. Starting with the search for antidotes when the mechanisms of action of the implicated substances were not well understood, this treatment moved towards a conservative attitude popularised as the "Scandinavian method" in the early 60´s and in close relationship with the implementation of the ICU´s. This method proved to be very useful for life support of patients poisoned by CNS depressants, not only barbiturates, but also other agents of increasing frequency such as benzodiazepines and opiates, all of which are functional toxics. The epidemiological profile of acute poisoning has changed dramatically in the last 30 years, as benzodiazepines, alcohol and opiates have substituted barbiturates. Nevertheless the first places are occupied by CSN depressants which continue to produce a similar clinical picture, focusing clinical and therapeutic research on the toxic coma management. Thus, for the last 15 years for some agents and some clinical situations there have been signs of a reversal of the way previously described, from the conservative life support to the coma cocktail, including hipertonic dextrose, thiamine, naloxone and flumazenil. A systematic approach for the management of the patient with altered mental status includes assessment of the patient´s vital functions. Naloxone and flumazenil can be considered antidotes in the stronger sense of the meaning because they are capable of deplacing opiates and benzodiazepines from their specific nervous receptors, reversing coma and obviating the need for intensive care measures such as intubation or mechanical ventilation. Some of the open questions about them are the specificity of their mechanism of action with the implication of the possibility of use for other toxic and no-toxic clinical situations and their safety, related to their side effects.

DESIGNER DRUGS

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As a result of the direct banning of hallucinogen and the so called "hard drugs", between 1970 and 1980 hundreds of clandestine laboratories in the United States began to synthesize chemical compounds similar in structure and effects upon banned drugs. These new compounds generically received the name of Designer Drugs. Designer Drugs can basically be classified in 3 types:

a) Agents destined to imitate the effects of opium (China White, Tango and Cash, Goodfella, New Heroine). b) Agents designed as a substitute for cocaine (Crystal caine, coco snow, synth coke). c) Substances we could call originals given to the novelty of their effects (Love pill, extasis, Venus, X files, STP, etc.) E. R. Services in their job to give a fast and effective answer to urgent processes, include among these pathology derived from the intake of this kind of substances.

Aims: -Suggestive synthomatology valorization of synthesized drugs intake. -Diagnosis and treatment of the intoxication in the E.R. Service. -Seriousness criteria. Methods: Bibliographic revision of medical literature affecting the matter and mass surveys. Results: Production of a suspect protocol, diagnosis and treatment of intoxications produced by synthesized drugs in the E.R. Service, as well as an epidemical pattern of consumption.

OVERSTAY IN THE EMERGENCY DEPARTMENT

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Objective: Determine the grade and characteristics from the patients with overstay in the Emergency Department from the Hospital No. 25 in Mexico City. Design: Descriptive, transversal. Methods: During the time between July 01 and December 31, 2001 we made a careful registration of all the patients attended in the emergency department of Hospital No. 25, determining the grade of overstay in the ED, and the cause of overstay. Results: During five months we analyzed a total of 1842 files, 727 at morning shift, 806 at the afternoon shift and 412 at night shift. 50.06% of the patients were male, and 47.73% were female. The predominant age group was 66-75 years with 416 cases, followed by the group aged from 56-65 years with 366 cases. 59% of patients had overstay in ED. 14.7% stayed at the ED between 6-12 hrs, 41.8% between 13-24 hrs and 43.48% for more than 24hrs. The principal cause of overstay in ED was the delay for admitting with 858 cases, followed by lack of revaluation by the ED with 519 cases. The predominant services involved were Internal Medicine with 625 cases, followed by orthopedics with 114 cases. The lack of interconsultation as an overstay cause was present in 233 cases, with the most frequently: General surgery with 114 cases, followed by Angelology with 47 cases. When lack of studies was the reason for overstay (167 cases), the CT Scan was the predominant with 75 cases, follow by endoscopies with 35 cases. Delay for transportation to other units accounted for 18 cases, followed by delay to transportation to 3rd level. Conclusions: Overstay in the ED of hospital No. 25 is elevated. The older patient is the one with more overstay. The principal cause of overstay in ED was the delay

waiting for admittance in hospitalization and the lack of revaluation by the physicians of the ED. Admission to Internal Medicine resulted in the most delay. The CT scan and endoscopies was the most solicited studies. The delay of revaluation by General surgery and Angelology were causes of overstay. Overstay in the ED can not only negatively influence the utilization of resources, but also the evolution and the prognosis of the patient. We need more specific studies for determining a specific solution for the problem.

CHARACTERISTICS OF PATIENTS TREATED BY CARDIOPULMONARY REANIMATION

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Aim: Determine the characteristics and outcome of patients treated by cardiopulmonary reanimation according a data sheet (Ulstein). Methods: A record and analysis of the patients according the Ulstein criteria was kept in the shock unit of HGR 25, including the principal characteristics of the patient, and outcome. Results: There were 33 patients; age group of the females: 51-60 years. ACLS interventions were performed as soon as possible. 55% survived the initial event, and 56% survived more than 24 hours. Respiratory depression was the principal cause of cardiopulmonary shock. The principal diagnosis of dead was the hyperkalemia. 24% survived over a month, with a Glasgow Coma Scale ranging from 5 to15. Conclusions: The characteristics of patients requiring cardiocerebropulmonary reanimation in the shock unit of HGR 25 are: older than 51 years, females principally, diagnosis of cardiovascular and metabolic ingress, predominate cause of shock was respiratory depression. The percentage of patients surviving cardiocerebropulmonary treatment in the shock unit of HGR 25 was elevated. The category of cerebral function of survivors was excellent. It will be necessary to follow these patients to determine long-term outcome.

ESTUDIO DESCRIPTIVO DE LOS CASOS DE PALUDISMO DIAGNOSTICADOS EN EL SERVICIO DE URGENCIAS DEL HOSPITAL SANTA CATERINA. GIRONA

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Objetivos: Conocer las características de los casos de paludismo atendidos en un hospital comarcal de los años 1996 al 2002 (ambos incluidos) en una zona con abundante población inmigrante. Metodología: Estudio descriptivo. Revisión exhaustiva de las historias clínicas de todos los pacientes con diagnóstico de paludismo. Variables recogidas: año del diagnóstico, edad, sexo, nacionalidad, lugar donde reside en el momento del diagnóstico, país tropical visitado, tiempo de estancia en el mismo, motivo del viaje, realización (o no) de profilaxis, duración de la misma, abandono de la misma, tipo de parásito implicado, sintomatología clínica en urgencias , datos de laboratorio de urgencias, complicaciones y si el paciente fue ingresado o no. Resultados: 28 casos: 1 en 1996, 7 en 1999, 10 en 2000, 7 en 2001 y 3 en 2002. 18 varones (64,3%) y 10 mujeres (35,7%). País de origen: 9 españoles (5 de padres inmigrantes), 13 africanos, 4 latinoamericanos y 2 cuyo país de origen es desconocido. Todos ellos residían en España en el momento del diagnóstico. De los 17 no españoles, en 7 casos acababan de llegar a España (menos de dos meses de residencia aquí: 3 procedentes de África y 4 de Latinoamérica), y los otros 10 residían en España desde hacía entre 6 y 19 años. Los 10 residentes habitualmente en España habían visitado en 7 casos países africanos y en 3 no se disponía del dato. La duración del viaje fue de un mes en cuatro casos, 45 días en un caso, 90 días en un caso y 120 días en dos casos. No se disponía de información en dos casos. De los 10 residentes habitualmente en España, 7 realizaron el viaje por motivos familiares. De los pacientes españoles, 1 viajó por motivos de cooperación internacional. De los 28 casos realizaron profilaxis antipalúdica 10 (35,7%: 2 con mefloquina, 1 con proguanil, 1 con otros fármacos y 6 no recordaban). En dos casos constaba el abandono de la profilaxis, en 4 referían haberla realizado correctamente y 4 no recordaban. Tipo de parásito: 22 casos P. falciparum (78,6%) y 6 casos P. vivax (21,4%). Clínica: 82% presentó fiebre, 10,7% cefalea, 7% fueron asintomáticos, 21,4% diarrea, 25% vómitos. 17,9% tenía hepatomegália y 32,1% esplenomegalia. Hemoglobina menor de 12gr/dl: 46,4%, el 76% presentaba menos de 150.000 plaquetas/dl y en tres casos menos de 50.000plq/dl. Uno de ellos tuvo una complicación y fue trasladado al hospital de referencia. Un caso no ingresó. Conclusiones:1.Ante cualquier fiebre en un paciente procedente del trópico debe descartarse un paludismo en un servicio de urgencias. 2.Los pacientes inmigrantes residentes en España pueden padecer un paludismo por haber viajado a su país de origen, así como sus hijos ya nacidos en España. Es preciso inquirir sobre viajes recientes, aunque el paciente afirme largo tiempo de estancia aquí.El porcentaje de pacientes que realizan profilaxis es muy bajo: el consejo al viajero parece ser poco intenso o, en todo caso, poco efectivo.

SHORT STAY UNIT. A WAY OF IMPROVING EMERGENCY DEPARTMENT OVERCROWDING

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Introduction: Short stay units (SSU) are an alternative to conventional hospitalisation that is able to ameliorate the appropriateness of admissions allocation and hospital stays, contributing to diminish emergency department overcrowding. AIMS. To evaluate the efficacy of a SSU in the appropriateness of admissions allocation and in the diminution of hospital stays. Methods: Study of the SSU activity in its two last operative periods (197 and 121 days respectively). The percentage of avoided admissions at the specialized units was determined. A formula able to calculate the hypothetical mean stay (MS) that these patients would have had at the corresponding specialized unit and the avoided hospital stays was designed. The formula is based in the evidence of constant MS in the specialized units during the last years and in the inference of these same MS in the studied periods. Results: Medical admission indexes were constant during the two studied periods (- 0.23% and + 0.16%), although the total admissions increased (+ 7.08% and + 2.98%), due to the increase in the emergency consults (+ 8.32% and + 2.16%). The SSU avoided 38.64% and 41.90% of admissions at pneumology and 30.75% and 24.91% of admissions at internal medicine. Calculus of hypothetical MS : (possible + real) x inferred MS = real x real MS + possible x hypothetical MS possible :

patients admitted at the SSU. real : patients admitted at the specialized unit. inferred MS : MS of the specialized unit in the same period of the previous year. real MS : MS of the specialized unit in the studied period. MS of the pneumological patients of the SSU was 4.89 and 4.29 days while their hypothetical MS was 8.75 and 7.17 days ; 1124 and 507 hospital stays were avoided. MS of internal medicine patients of the SSU was 4.93 and 4.62 days while their hypothetical MS was 9.33 and 7.31 days ; 1082 and 358 hospital stays were avoided. Conclusions: There is a progressive increase in the hospital beds need due to the increase in care demand. The SSU diminishes the inappropriate admissions allocation, as well as the inappropriate stays so that it contributes to optimize hospital resources and to improve the emergency department overcrowding.

DIPSTICK URINALYSIS AS A DETERMINANT TEST IN THE MANAGEMENT OF DYSURIA AT THE EMERGENCY DEPARTMENTS

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Dysuria is a common cause of consultation in an emergency department. Uncomplicated urinary tract infection (UTI) usually manifests as dysuria. The fact that dysuria is not exclusive of UTI, makes a screening method, that avoids indiscriminate antibiotic treatments, necessary. AIMS. To determinate the predictive value of dysuria for low urinary tract infection and to compare the usefulness of dipstick and direct microscopic observation as screening and diagnostic methods. Methods:168 patients with dysuria were processed with dipstick and direct microscopic observation. We considered the positive culture as an accurate diagnosis of low UTI. The sensibility (S), specificity (E), positive predictive value (PPV) and negative predictive value (NPV) of both tests was determined. Results:PPV of dysuria for low UTI was 61.9%, 37.78% for men and 70.73% for women. PPV for men under 30 years of age, between 30 and 60 years of age and over 60 years of age was 14.28%, 35% and 72.73% respectively. PPV for women in the same age groups was 82.35%, 55.88% and 57.14% respectively. The presence of leukocytes in dipstick and direct microscopic observation showed a S of 89.42% and 82.69%, a E of 56.25% and 58.06%, a PPV of 76.86% and 76.78% and a NPV of 76.59% and 66.67% respectively. The combined presence of leukocytes and blood in dipstick and direct microscopic observation showed a S of 76.92% and 40.38%, a E of 71.43% and 77.42%, a PPV of 81.63% and 75% and a NPV of 65.71% and 43.64% respectively. The presence of nitrite in dipstick showed a S of 35% and a E of 92.19%. Conclusions:The antibiotic treatment of all patients with dysuria implies a high percentage of unnecessary treatments, specially in men. The presence of leukocytes in dipstick is slightly more valid than direct microscopic observation as a screening test, while both methods are weak diagnostic tests. The combined presence of leukocytes and blood increases their diagnostic value, maintaining dipstick a higher validity as a screening test. Given that dipstick has, at least, similar results to direct microscopic observation and that it is an easy, fast and cheap test, we support its use instead of direct microscopic observation in patients who attend an emergency department for dysuria.

IMPLICACIONES EN LA COMUNIDAD DESPUÉS DE LA ELABORACIÓN DEL PROTOCOLO DE ATENCIÓN A LA MUJER VÍCTIMA DE MALOS TRATOS

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Introducción: Nuestro hospital desde el año 2001 posee el protocolo de "Atención a la Mujer Víctima de malos tratos". Dentro de la actividad del Servicio siempre nos ha preocupado ir mejorando la calidad asistencial. Ya en 1998 detectamos y pusimos en evidencia la incidencia dentro de nuestra población de violencia doméstica, días, horas en que acudían y tipo de lesiones. Con la finalidad de garantizar una continuidad en la atención de estas pacientes nos pusimos en contacto con los organismos municipales de las comunidades de las cuales somos hospital de referencia, y así poder ser parte integrante de los circuitos municipales de atención a las víctimas de violencia domestica. Objetivo: Demostrar la importancia que ha tenido la implantación del "Protocolo de atención a la víctima de malos tratos", tanto para nuestros profesionales, como para la población que se encuentra en nuestra área de influencia.Material y métodos: para poder dar una respuesta correcta a esta problemática se plantaron acciones a tres bandas: Preparación personal. Preparación en el ámbito institucional o departamental: Elaboración e implantación del Protocolo, realización de sesiones abiertas al personal sanitario de la comunidad, participación en los programas docentes de Formación continuada, realización de jornadas para los estudiantes de enfermería, inclusión dentro de los programas de Doctorado, difusión a todos los responsables de servicio del Hospital y de las diferentes áreas de soporte, participación en forums de tipo sanitario. Conexión con la comunidad: Se creo una base de datos específica que nos permite saber el origen de las pacientes, esto nos ha permitido incidir en aquellas comunidades en las que había más dificultad de enlace a la hora de realizar una derivación de la paciente a los circuitos integrados. Hemos participado activamente en la elaboración de tres circuitos de atención integral a los casos de violencia doméstica. Resultados: En el año 2002 se han atendido 303 casos de agresiones a mujeres de las cuales 146 corresponden a casos de violencia doméstica. La mayor incidencia se daba en los municipios de l'Hospitalet y del Prat del Llobregat. Las pacientes han acudido a urgencias mayoritariamente los domingos, en la franja horaria de las 23 a las 7 horas. En el 4,7% nos encontramos con casos de reincidencia. El 90% son dadas de alta a su domicilio y hubo 1 caso de "exitus". Conclusiones: La participación de nuestro centro en la elaboración y seguimiento de los circuitos integrados de asistencia a las mujeres víctimas de violencia doméstica que se crean en las comunidades de nuestra área de influencia, permite garantizar que la asistencia que recibirán estas mujeres tenga una continuidad. A la vez, al objetivar nuestros problemas a la hora de la derivación, ha facilitado el que determinados municipios con incidencia elevada de casos de violencia doméstica, se vean obligados a crear estos circuitos integrados si no los poseían y a la vez les hemos ayudado a demostrar su eficacia si ya estaban creados.

CARACTERIZACIÓN DE SUBGRUPOS DE FIBRILACIÓN AURICULAR EN LA ASISTENCIA DE URGENCIAS. ESTUDIO A.C.F.A.S.

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Objetivos:La presentación clínica y las causas de la fibrilación auricular difieren de las presentadas en décadas anteriores.Un objetivo del Proyecto A.C.F.A.S.(Control de arritmia por fibrilación auricular en Soria) era lograr una caracterización de la presentacion clínica y de los factores desencadenantes y acompañantes de esta patología. Métodos y resultados:La población estudiada comprende un conjunto de 884 pacientes, con edades comprendidas entre 23 y 99 años (Edad media:74.28;D.S.10.77)y distribución por sexos de 54.1 % de varones y de 45.9 % de mujeres,atendidos en el Servicio de Urgencias del Hospital desde enero de 1995 a diciembre de 2002.El criterio de inclusión ha sido la constatación electrocardiográfica de fibrilación.Hemos clasificado según forma de presentación en paroxística(< 7 días),crónica(>1 mes) y persistente(>7 días e <1 mes).La prevalencia relativa encontrada paralos diferentes grupos ha sido del 13.83,del 50 y del 36.16 % respectivamente.Los factores asociados más frecuentes han sido hipertensión arterial (35.85 %),cardiopatía isquémica(13.12 %) y valvulopatías(12.55 %),con diferencias significativas entre ambos sexos.El protocolo aplicado nos ha permitido obtener los siguientes resultados:cardioversión espontánea,8.71 %;cardioversión espontánea bajo fármaco controlador de frecuencia (digital,verapamilo,diltiazem o betabloqueante), 18.89 %; cardioversión química dirigida (flecainida, amiodarona,propafenona,sotalol) 24.32 %.El índice de eficacia del proceso se ha situado en el 38.12 %;y el nivel de recurrencias en la población cardiovertida que ha seguido tratamiento antiarritmico preventivo ha sido del 12.21 %. Conclusiones:Defendemos la necesidad de lograr la unificación de criterios en la atención de este tipo de pacientes. También destacamos la necesidad de contemplar criterios de clasificación y establecimiento de anticoagulación preventiva, junto con control adecuado de la frecuencia ventricular,como paso previo a la toma de decisiones.

DIFUSIÓN Y ASIMILACIÓN DE LAS RECOMENDACIONES DE LOS CONSEJOS Y ASOCIACIONES INTERNACIONALES DE RESUCITACIÓN

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Objetivo: Con este trabajo se desea averiguar si las recomendaciones de la American Heart Association y del Consejo Europeo de resucitación son lo suficientemente difundidas y asimiladas entre los profesionales sanitarios. Metodología: Para ello elaboramos un cuestionario con 10 preguntas sobre resucitación, con 4 diferentes respuestas: 2 falsas, 1 acorde con antiguas recomendaciones de dichos consejos y 1 de acuerdo con las últimas recomendaciones. Este cuestionario lo contestaron 100 enfermeros que trabajan en servicios de urgencias de la Comunidad de Madrid. Resultado: Únicamente el 5% de los enfermeros contestaron a 5 ó más preguntas de acuerdo a las últimas recomendaciones de la AHA y el ERC; la gran mayoría respondió de acuerdo a antiguas recomendaciones. Conclusión: Se emplean abundantes medios económicos en investigar y desarrollar nuevas recomendaciones que ayuden a los profesionales sanitarios a mejorar la supervivencia de sus pacientes, pero paradójicamente no se emplean más tarde dichos medios en informar sobre los avances sanitarios obtenidos y formar adecuadamente a los citados profesionales.Únicamente la motivación particular de algunos enfermeros y la utilización de foros tecnológicos, ayudan a difundir lentamente estos útiles y costosos avances. Sin información y difusión los avances sanitarios no son útiles para el paciente.

CAUSÍSTICA DE LA PREPARACIÓN DEFECTUOSA DE LA ENFERMERA PARA AFRONTAR UNA URGENCIA

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Objetivo: Una emergencia surge en cualquier lugar, cualquier persona y no puede esperar en muchos casos a que llegue un profesional mejor preparado. El enfermero, al terminar la universidad tiene la responsabilidad profesional, moral, legal y social de actuar eficazmente ante una emergencia, ya sea en el medio laboral como en el extralaboral. Por ello deseamos averiguar si el enfermero español está formado adecuadamente para afrontar estas situaciones. Metodología: Para ello realizamos una profundización en las directrices generales del Ministerio de Educación y Cultura (MEC) respecto al título de enfermería. Asímismo buscamos y analizamos los planes de estudio de las diferentes universidades españolas (públicas y privadas) que ofertan esta carrera. Resultado: En las directrices del MEC respecto a esta carrera, no se reflejan ni una sóla vez las urgencias ó emergencias, ni como una asignatura específica ni como parte de los subtemas de otras asignaturas. Respecto a los planes de estudio, la carrera de enfermería se imparte en 105 centros de la geografía española; 51 centros ofertan al menos una asignatura específica de urgencias y emergencias, 40 de ellos como optativa ó de libre elección con una media de 5,28 créditos, y 11 como troncal u obligatoria con una media de 4,13 créditos. Por tanto, al menos el 51,42% de los enfermeros españoles no han cursado ni una sóla asignatura específica de urgencias ó emergencias. Conclusión: El enfermero español, de forma reglada y obligatoria, no está bien formado en el tema de las urgencias, siendo un peligro potencial para él, para el paciente y para la imagen que la sociedad tiene de un profesional sanitario de su envergadura. El MEC y las universidades debieran replantearse el peso formativo de las urgencias en la carrera de enfermería.

ESTUDIO CUALITATIVO: INMIGRANTES ILEGALES JUZGAN LOS SERVICIOS DE URGENCIAS ESPAÑOLES

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Objetivo: La Sanidad Española garantiza asistencia íntegra y de calidad a los inmigrantes ilegales en caso de urgencia. Sin embargo es evidente la escasa afluencia de "sin papeles" a los servicios de urgencias públicos. Deseamos saber las causas, desde el punto de vista de los principales afectados. Metodología: Para ello realizamos un estudio cualitativo, mediante un foro de 8 inmigrantes ilegales; 2 de origen sudamericano, 2 asiático y 4 africano. Todos ellos afirman no conocerse y se seleccionan de forma aleatoria a través de varias ONGs. Resultados: Las conclusiones a las que se llega es que realmente existe una incomprensible paradoja; a ellos únicamente se les ofrece asistencia en caso de urgencia, por lo que ciertas patologías no urgentes tras no ser tratadas desembocan en una urgencia. Asímismo no se confía en el secreto profesional sanitario, por lo que afirman que exclusivamente acuden en caso de emergencia. Destacan el "poco tacto" de los servicios de admisión en urgencias a la hora de pedir la documentación, y más de la mitad afirma conocer casos en los que ilegales, tras acudir a servicios de urgencias fueron detectados por el cuerpo de policía y poco tiempo después fueron puestos a disposición judicial. Conclusión: Las justificadas ó no justificadas conclusiones a las que llegan los inmigrantes ilegales en España, hacen peligrar los derechos humanos y la salud pública. Es necesario corregir esta peligrosa situación que perjudica tanto a legales como a ilegales.

CONSECUENCIAS DE LA PREPARACIÓN DEFECTUOSA DE LA ENFERMERA PARA AFRONTAR UNA URGENCIA

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Objetivo: Es evidente la necesidad de que el enfermero sepa actuar eficazmente ante una situación de urgencia ó emergencia, ya sea en el medio laboral ó extralaboral. En España, como consecuencia a una mala planificación de los estudios por parte del Ministerio de Educación y Cultura (MEC) y las universidades, el enfermero acaba la carrera asumiendo que no está al nivel de las exigencias en este tema. Por ello debe cursar postgrados que le permitan completar las necesidades académicas de su profesión, por lo que existe una gran diferencia entre el número de cursos ofertados de urgencias en relación al resto de áreas. Con este trabajo deseamos determinar la validez de esta hipótesis. Metodología: Para ello realizamos una encuesta entre alumnos de tercer curso de la escuela de enfermería de La Rioja. Asímismo, realizamos una búsqueda de postgrados ya que la oferta está directamente relacionada con la demanda. Resultados: Con cifras en torno al 80%, los 50 alumnos de tercer curso de enfermería encuestados opinan que no están suficientemente preparados para actuar ante una urgencia ó emergencia, creen que es una obligación para todo enfermero estar preparado en este tema, que su formación universitaria pregrado debiera prepararlos para actuar en esas situaciones, que cursarán al menos un postgrado de urgencias y que lo harán porque consideran que lo necesitan para trabajar mejor y no como una especialización. De los postgrados encontrados, un tema destaca sobre todos los demás; los cursos de urgencias, emergencias y catástrofes para enfermería ofertados son un 33% de todos los del estilo a distancia, y el 25% de la modalidad presencial. Conclusiones: La hipótesis planteada es verdadera, por lo que si se replantearan los planes de estudio este fallo en la formación no existiría y los postgrados cumplirían su papel de especialización, como en el resto de los campos sanitarios.

SERVICIOS DE URGENCIA HOSPITALARIOS Y DE ATENCIÓN PRIMARIA: PUNTO DE VISTA DEL USUARIO

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Objetivo: Se pretende averiguar si los usuarios del sistema sanitario español están informados de los servicios que presta cada estructura asistencial, de donde deben acudir cuando les surje un problema sanitario determinado, de cual es su opinión sobre la calidad asistencial que ofrece cada estructura, así como de si son conscientes del problema asistencial derivado de la mala utilización de los medios sanitarios existentes. Metodología: Para ello se desarrolla una ficha encuestatoria con 12 preguntas cerradas. La muestra poblacional se cierra con 300 usuarios encuestados. El estudio se realiza en Logroño, capital de la Comunidad Autónoma de La Rioja. Resultados: El 41% de la muestra afirma no saber que existen centros de salud que ofrecen asistencia sanitaria de urgencia las 24h del día. El 67% afirma no saber distinguir que patología es susceptible de asistencia sanitaria urgente, y evidentemente ante la duda el 97% acude a los servicios de urgencia. El 71% cree que la asistencia sanitaria de urgencia es de "mucha mayor calidad" para cualquier patología en servicios hospitalarios, comparándolos con la asistencia que prestan los servicios de atención primaria. El 91% es consciente de la saturación de los servicios de urgencia hospitalarios, y el 83% de ellos opina que la solución es ampliar los servicios de urgencias hospitalarios. Conclusión: La evidente saturación de los servicios de urgencias hospitalarios está directamente relacionado con la mala utilización de estos por parte de los usuarios. Los ciudadanos no tienen por qué saber realizar un autotriaje; esto desborda las urgencias hospitalarias. Es imprescindible una adecuada política informativa hacia los ciudadanos, mediante campañas públicas que ayuden a optimizar la utilización de los recursos existentes, potenciando la atención primaria.

ESTUDIO COMPARATIVO ENTRE MÉDICOS Y ENFERMEROS: GRADO DE IMPLICACIÓN EN EL VOLUNTARIADO DE UNA COMUNIDAD EN EL ÁREA DE SOCORROS Y EMERGENCIAS

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Objetivo: Se desea determinar el número de médicos y enfermeros de la Comunidad Autónoma de La Rioja que

ofrecen servicios en el área de socorros y emergencias de forma altruista, comparando por tanto el grado de implicación con la comunidad, de ambos colectivos. Metodología: Para ello realizamos un estudio cuantitativo descriptivo comparando los datos obtenidos en los colegios de Medicina y Enfermería de la comunidad, así como en las diferentes Organizaciones No Gubernamentales y Asociaciones. Resultados: En La Rioja están censados 270.400 habitantes. Están colegiados 1200 médicos y 1599 enfermeros. 61 médicos y 173 enfermeros participan de forma más ó menos activa y altruista en actividades de asistencia sanitaria urgente. Conclusiones: El 10,81% de los enfermeros riojanos colabora con las ONGs de su comunidad para mejorar la asistencia en socorros y emergencias, mientras que únicamente el 5,08% de los médicos participa en dicha labor. En ambos colectivos se observa una escasa participación, destacando negativamente los profesionales de la medicina. Debe producirse un cambio en esta tendencia, ya que la base de una sociedad es la participación de la comunidad ciudadana, algo que promueve la OMS en su carta de Ottawa y que ya se produce en otros paises europeos con una tradición mucho más solidaria.

ENCUESTA TELEFÓNICA DE SATISFACCIÓN DE PACIENTES ATENDIDOS POR UN SERVICIO DE EMERGENCIA PREHOSPITALARIA URBANO

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Introducción. El servicio de asistencia municipal de urgencia y rescate, SAMUR-Protección Civil tiene una permanente inquietud por dotarse de nuevos instrumentos que le proporcionen la seguridad de que los pacientes reciben un servicio de calidad. Existe un auge de las investigaciones sobre la calidad de los servicios en sus distintos ámbitos de atención, sin embargo, aún no se ha perfeccionado los instrumentos de medición. Objetivos. Diseñar un instrumento que permita evaluar la calidad percibida por los usuarios de SAMUR P. C.,y determinar su grado de satisfacción. Material y métodos. Descriptivo transversal retrospectivo mediante encuesta telefónica. Población: pacientes que recibieron atención sanitaria de SAMUR PC de mayo a diciembre de 2002. Tamaño muestral 384 pacientes (se estimó una proporción esperada de satisfacción del 50% , precisión del 5 % y con un nivel de confianza del 95 %). Muestra y reposición mediante muestreo aleatorio simple. La población quedó estratificada en atención a enfermos leves/ alta en el lugar y pacientes con traslado hospitalario. Se definió concepto paciente/usuario y los parámetros: accesibilidad, rapidez, seguridad, agilidad, competencia técnica y profesional, comunicación, trato humano y ético, confort y transferencia hospitalaria . Construcción de preguntas autoexplicativas, evitando el uso de "instructivos", lenguaje y sintaxis compresibles e inequívocos para el entrevistado. El cuestionario quedó configurado por 11 preguntas cerradas que _evalúan las fases del proceso asistencial y una abierta para observaciones. Se utilizó para cuantificar la respuesta la "escala Likert" (5 alternativas desde muy alto, alto, intermedio, bajo o muy bajo grado de adherencia a la pregunta.). Variables: edad, sexo, demandante, tiempos reales de respuesta, resolución de la demanda asistencial y parámetros definidos. Limitaciones: filiación/ teléfono incorrecto y pacientes incapaces de responder con precisión que se controló con entrevista a observador directo. Gestión de los datos y análisis estadístico, Access y SPSS versión 10.0. Resultados. La encuesta se aplicó a 384 pacientes el 53,9% eran hombres. La edad media fue de 45,46 años (DE: 21,69). IC del 95%, 43,28-47,63, que para hombres fue de 42,10 años (DE:20,85). y para mujeres de 49,38 (DE:22,06), (p<0,001). El 35,9% corresponde a atención a pacientes leves / alta en el lugar y 64,1% a pacientes con traslado hospitalario. Responde paciente en 74,2 % y el 25,8% restante el observador directo. Alcanzan las máximas valoraciones las variables: trato humano, cuidado de intimidad, seguridad y confianza en el equipo sanitario (alta/muy alta en un 95,1%,93,5%,y 92,5% respectivamente), mientras que el tiempo de respuesta con una valoración muy alta/alta lo fue para el 78,9%. Al comparar la media real de tiempo de respuesta con la percepción del paciente no se obtuvo significación estadística. La valoración global del grado de satisfacción fue de muy alto/alto en un 93,28% de los encuestados. Conclusiones. Los pacientes manifiestan un elevado grado de satisfacción que, lejos de frenar impulsos, es un substrato óptimo para generar nuevas intervenciones de optimización de la calidad asistencial y lograr la calidad integral.

DIAGNOSTIC CORRELATION BETWEEN EMERGENCY TEAMS AND HOSPITALS

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Goals: To Know on one hand the diagnostic correlation degree between emergency teams (ET) and their reference hospitals; and on the other the cause of diagnosis failures. To describe the pathology attended by the ET. Methodology: Follow up of all the patients transported by the ET of the 061 service of Almería (Spain), to their references hospitals through the clinical historial of the ET and the final clinical historial of the hospitals during 3 consecutive months. Following variables were taken into account: Age, sex, ET diagnosis (ETD), Hospital diagnosis (HD), Diagnostic correlation (DC), Admission place (AP), ET diagnosis in groups (ETDG), Hospital diagnosis in groups (HDG) and Diagnostic failures (DF). A descriptive statistical study has been carried out. Results: Total of patients: 241; Medium age: 56,9; Sex: Females 97 (40,2%); ETD: The main were: 32 (13,3%) Unstable angina (UA); 27 (11,2%) Arrithmia; 22 (9,1%) Lung acute edema (LAE); 20 (8,3%) Severe head injury (SHI); 19 (7,9%) Angina pectoris and 17 (7,1%) Apoplexy. HD: The main were: 25 (10,4%) UA; 25 (10,4%) Arrithmia; 22 (9,1%) LAE; 17 (7,1%) Apoplexy; 17 (7,1%) Angor pectoris; 15 (6,2%) SHI. DC: Yes: 218 (90,5%); No: 23 (9,5%). AP: Any hospital service (except emergency service) 126 (52,3%); Emergency Service: 67 (27,8%); Intensive Care Units: 48 (19,9%). ETDG: The main were: 112 (46,5%) Cardiology; 36 (14,9%) Traumatology; 33 (13,7%) Neurology. HDG: The main were: 105 (43,6%) cardiology; 36 (14,9%) Traumatology and 33 (13,7%) Neurology. DF: Out of 23 without DC, 17 (74%) were related to the clinical historial and 3 (13%) were related to the Phisical exploration. Conclusions: A high degree of diagnostic correlation exists between emergency teams and hospitals, more or less 90%. The more frecuent pathology attended and transported by the emergency teams was the cardiological pathology. The more frecuent failures in the diagnostic correltion are generated by unstable angina, angor pectoris and chest pain, mainly due to differences in clinical historial assesments.

PACIENTES ATENDIDOS DE VIOLENCIA DOMESTICA POR SAMUR-PC EN EL AÑO 2002

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Introducción: El servicio de asistencia municipal de urgencia y rescate, SAMUR Protección Civil, presta asistencia sanitaria a pacientes por violencia domestica. La violencia doméstica, agresión física o psíquica realizada contra una persona por parte de su cónyuge, excónyuge, persona con la quién conviva o haya convivido, y que pretende causarle daño físico o emocional. Las repercusiones son tan amplias como graves. En España y según el V barómetro de opinión realizado en enero de 1998, el 18% de españoles dice conocer algún caso entre sus conocidos o familiares de malos tratos físicos a la mujer por su pareja, esto supone cinco millones y medio de personas. Objetivos.Conocer las características epidemiológicas de los pacientes atendidos de violencia doméstica por SAMUR-PC. Material y métodos: Descriptivo transversal retrospectivo. Población: pacientes atendidos por SAMUR-PC de Madrid en el año 2002. Variables: sociodemográficas, distrito, temporalización, patología y traslado hospitalario. Confidencialidad de los datos. Se revisaron las Historias Clínicas. Proceso de datos en Excel y análisis estadístico mediante SPSS. Resultados: 563 (95,2%) mujeres y 28 (4,8%) hombres. Edad media mujeres:33,27 años (DE:10,76), IC:95%, 32,37–34,17 y varones:38,68 años (DE:13,11), IC del 95%, 33,60- 43,76, (p< 0,05). Distribución horaria: máximo de 23-3h y mínimo de 6-7h. Máximo sábado:20,1%, seguido de domingo:19,3%. Se registra mayor número de casos en el Distrito Centro. Distribución mensual homogénea. Heridas y contusiones menores:74,12%, trauma facial:6,52% y resto disperso. Trasladado hospitalario:12,39% del total. No significación estadística por sexo entre traslado/ no traslado. Conclusiones: Perfil demográfico, coincide con los valores de otros estudios. Distribución temporalización, se ajusta a estudios previos realizados por SAMUR. No es una problemática de exclusiva valoración sanitaria, y que requiere de un abordaje integral biopsicosocial.

ORAL COLESTIRAMINE USEFULNESS IN PATIENTS WITH DIGOXIN TOXICITY

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Objective: To assess the effectiveness of two oral protocols of cholestyramine administration in patients with signs and symptoms of digoxin toxicity. Patients and Methods: We conducted a retrospective study of 90 patients admitted to our hospital between 2002 and 2003, all with digoxin plasma levels = 2 ng/ml. Exclusion criteria: uninterpretable data, previous treatment with digoxin-specific antibody fragments (Fab), patients on hemodialysis, rebound effect during treatment with cholestyramine, patients with only one value of Cp and serum samples obtained in the distribution period. Oral cholestyramine schemes: A: 4 grams every 6 hours until digoxin levels <2 ng/ml and B: 1 gram every hour during the first 6 hours, followed by 4 gram every 6 hours until digoxin levels <2 ng/ml. Effectiveness evaluation: Digoxin extraction coefficient (E%) at 24 hours: E%= 100 (Cpo-Cp24h) / Cpo. Cpo= Cp initial; Cp24h = Cp experimental after 24h. We used the Student's t-test to examine the quantitative parameters and the c2 test for the qualitative ones. Results and Discussion: 29 patients (32%) fulfilled the inclusion criteria. Risk factors for digoxin accumulation were: advanced age (mean 81.5 years), impaired renal function (mean creatinine clearance 31.5 ± 11.5 ml/min), enhanced by weekly doses administration of digoxin (1.25 to 1.75 mg) in most of the patients (65.5%; CI 95% 48.2-82.8). Internal factors (anthropometric characteristics, renal function) and external (pharmacological interactions) were similar in patients receiving scheme A (n=21) and patients receiving scheme B (n=8). Scheme A and B extraction coefficient (E%) 24 hours after cholestyramine administration was 30%, independently of the initial Cp. Conclusions: Body digoxin elimination in patients with digoxin intoxication following scheme A, seems to have the same effectiveness and is less complex than scheme B. The inclusion of more patients in the study will definitively help to confirm this hypothesis.

B-TYPE NATRIURETIC PEPTIDE IN THE DIAGNOSIS OF HEART FAILURE IN THE EMERGENCY DEPARTMENT

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Objective: To asses the role of B-Type natriuretic peptide (BNP) in the diagnosis of heart failure in patients with acute dyspnea. Methods: 40 patients were included in a prospective (diagnostic test evaluation) study conducted from March to June 2003 in the Emergency Department of the Dr. Peset Hospital (Spain). Inclusion criteria: patients over 18 years of age referring dyspnea as the main complaint without previous history of congestive heart failure (CHF). Exclusion criteria: advanced renal failure (creatinine clearance <15 ml/min), acute myocardial infarction and overt cause of dyspnea (including chest wall trauma or penetrating lung injury). Data collection: baseline demographics, clinical history, physical examination, electrocardiogram, chest X-ray, laboratory test and BNP plasma levels. A blinded transthoracic echocardiography was performed in each patient for detection of the left ventricular dysfunction. Statistical analysis: baseline characteristics were reported in counts and proportions or mean + SD values. Univariate comparisons were made with X2 or 2-sample t test and decision statistics computed from 2x2 tables. Results: Mean age 68.6 + 14.2 (range 49-84) years; 25 (62.5%) women and 15 (37.5%) men. The final diagnosis was: CHF in 27 (67.5%); chronic obstructive pulmonary disease 9 (22.5%); pulmonary embolism 3 (7.5%); anemic syndrome 1 (2.5%). At a cut off 150 pg/ml, BNP had a sensitivity of 90% and specificity of 77%. The negative predictive value was 77% for diagnostic of CHF. Conclusion: Used in conjunction with other clinical information, measurement of BNP is useful in stabliushing the diagnosis of CHF in patients with acute dyspnea.

DIGOXIN TOXICITY AND RISK FACTORS IN THE EMERGENCY DEPARTMENT

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Objectives: To determine the risk factors and the frequency of clinical manifestations with elevated serum digoxin concentration (SDC) in patients in the Emergency Department. Methods: 39 patients over 18 years were evaluated with elevated SDC (>2.6 nmol/L (>2.0 ng/ml)) monitoring at least 6 h after administration of the last dose and measured using immunoassay technology in the Emergency Department of a General Hospital in Spain during 2002-2003 period. Exclusion criteria: uninterpretable data, previous treatment with digoxin specific Fab antibody fragments, "predistributional" serum samples and dyalisis patients. Data on patients demographics, serum chemistry values, indication for digoxin treatment, clinical evidence of digoxin toxicity (symptoms and elctrocardiographyc changes) and digoxin dosing data were collected. Statistical analysis: Nominal data were analyzed using X2 or Fisher exact test. Continuous variables by Student t test and analysis of variance with multiple t test and Bonferroni correction for all significant findings. Level of significant was set at $p<0.05$. Results: Mean age 72.6 + 13.4; 29 (74.3%) women and 10 (25.6%) men. 34 (87.1%) patients had at least 1 clinical manifestation of digoxin toxicity. Nausea and vomiting were the most common symptoms. We found and statistical significant association between age (p 0.027), heart failure (p 0.030), deteriorating renal function (p 0.018) and elevated SDC. Electrolyte abnormalities not differed significantly ($p>0.05$) Conclusions: Diagnosis of digoxin toxicity remains difficult because sings and symptoms are non specific, so we may suspect toxicity in those patients with deteriorating renal function or advance congestive heart failure.

PSYCHOLOGICAL INTERVENTION IN AN OUTHOSPITAL URGENCY / EMERGENCY SETTING

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Background: SAMUR-Civil Protection Psychologist Team (SCPPT) is entrusted with the main task of psychologically intervening in urgency/emergency events, People's usual coping strategies may not be enough to deal with the event, and, as a result, a nervous breakdown may ensue. In such settings, SCPPT gives people prompt on-site psychological support in order to help them cope with the situation. Later, SCPPT performs phone follow-up, and refers the individuals to receive specialized care as necessary. Objective: To report the results from SCPPT interventions in 2002. Method: Study design: Descriptive cross-sectional review study. Intervention reports from SAMUR-Civil Protection (SCP) of Madrid City Council in 2002 were reviewed. Study population: Patients treated by SCP and their relatives. Giving bad news (GBN): this intervention includes GBN as well as help with the first steps of the bereavement process for relatives and close friends of people who have died in a traffic accident. Psychological intervention and support for the unexpected death of a relative or a close friend. Other interventions: Psychological intervention and support in any situations resulting in emotional crisis due to events not provided above. Results: 115 subjects comprise the study population. After analysis of the data, we conclude that psychological intervention in all cases contributed to minimize the emotional impact from unexpected ill-fated events, to support and help initiate the bereavement process, and to help people identify and use their own coping strategies to adequately face the crisis situation. Conclusion: Prompt psychological intervention is needed in situations endangering an individual's emotional stability in order to: 1. Help people identify and use their own coping strategies 2. Prevent potential mental disorders. Further analysis on results with larger samples is warranted, thus it is necessary to systematically gather data from interventions.

COORDINACION DE RECURSOS SANITARIOS AEREOS EN LAS ISLAS CANARIAS

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El Centro Coordinador de Emergencias y Seguridad (CECOES 1-1-2) de Canarias funciona con dos Salas operativas (una en Las Palmas de Gran Canaria y otra en Santa Cruz de Tenerife) interconectadas entre sí y con capacidad para actuar como un solo centro. El Servicio de Urgencias Canario (SUC) dispone de dos helicópteros medicalizados y un avión medicalizado. Todas las islas tienen al menos un Centro hospitalario y los hospitales de tercer nivel están en Gran Canaria y Tenerife. Objetivos: Estudio descriptivo retrospectivo de la actividad de los recursos aéreos sanitarios coordinados por el CECOES 112 de Canarias durante los años 2000 y 2001. Análisis de las herramientas y procedimientos empleados para coordinar este tipo de transporte. Material Y Metodo: Herramientas de coordinación: Red de helisuperficies de emergencias Cartografía Aplicación informática Transmisión de datos (EKG vía fax) Procedimientos: Transporte secundario interinsular Hoja de evaluación previa al traslado Criterios para activación de helicóptero o avión Transporte secundario Canarias-península Hoja de evaluación previa al traslado Hoja de activación del SEM de destino Transferencia del paciente con rotores en marcha Desfibrilación en vuelo Explotación estadística de datos de actividad años 2000 y 2001 Resultados: RESULTADOS GLOBALES AÑO HELI LPA HELI TFE AVION LPA AVION TFE TOTAL HELI TOTAL AVION TOTAL LPA TOTAL TFE TOTAL AEREO 1999 - - - - - - 853 454 1307 2000 597 392 312 120 989 432 909 512 1421 2001 545 384 385 173 929 558 930 557 1487 TRANSPORTE SANITARIO EN AVION AÑO PENIN LPA PENIN TFE TOTAL PENIN INTERISLA LPA INTERISLA TFE TOTAL INTERISLA TOTAL AVION 2000 51 36 87 261 84 345 432 2001 26 33 59 355 144 499 558 TRANSPORTE SANITARIO EN HELICOPTERO AÑO EMERGEN LPA EMERG TFE TOTAL EMERG TS LPA TS TFE TOTAL TS HELI LPA HELI TFE TOTAL HELI 2000 2001 Conclusiones: 1. Disminución de los traslados a península desde la apertura de la Unidades de trasplantes, de lesionados medulares y cirugía cardiaca infantil. 2. Incremento progresivo del número total de movimientos de recursos sanitarios aéreos en los últimos años que tiende a estabilizarse entrando en una fase de meseta. 3. Mayor movilización de helicópteros sanitarios en emergencias desde la Sala de Las Palmas. 4. Incremento de la red de helisuperficies de emergencia para potenciar la

actividad de los helicópteros sanitarios en emergencias 24 H 5. Incremento progresivo de los transportes secundarios en avión y mayor disponibilidad del helicóptero para emergencias 6. La insularidad, la dispersión geográfica de la población, la lejanía de algunos servicios médicos de referencia en península hacen que el uso del transporte sanitario aéreo en Canarias sea mayor que en el resto de las comunidades autónomas con relación a su población.

CRITERIA FOR CRITICAL CARE ADMISSION: CONCORDANCE BETWEEN PHYSICIAN'S CRITERIA AND NEED FOR NURSING CARE

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The physicians' perception of a patient severity of illness does not always agree with his/her requirements of nursing care. Requirement of nursing care is crucial for admission to the critical care area. Objective: To assess the correlation between physicians' criterion of critical care admission and nursing care requirements as determined with a score for measuring nursing workload for ICU patients. Methods: A cross-sectional study of 2,156 days of stay for 348 consecutive patients admitted to the emergency department observation unit. For each patient the following data were recorded on a daily basis: place in which the patient would had to be admitted in the opinion of the attending emergency physician, and intensity of nursing care according to the nine equivalent of nursing manpower use score (NEMS). NEMS is a measure of nursing workload, with scores ranging from 0 to 56. A NEMS score ? 25 was considered a criterion for admission in critical care wards. Days of hospitalization instead of number of patients were analyzed because the same patient may require different levels of care during his/her admission. Results: Correlation between physicians' criteria and NEMS, analysing intensive-care patients versus non-intensive care patients, was 78.8%, with a kappa value of 0.58. According to the physicians' opinion only 43% of patients with a NEMS = 25 met criteria for critical care admission. Conclusion: There is a good correlation between physicians' criteria for critical care admission and NEMS. However, emergency care physicians tend to underestimate requirement of critical care.

CALIDAD DE LA DERIVACIÓN DESDE PRIMARIA AL SERVICIO DE URGENCIAS DE UN HOSPITAL (SUH) DE REFERENCIA

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Objetivos: Analizar la calidad de la derivación procedente de Atención Primaria e identificar aquellas deficiencias en la información contenida en los volantes que pueden dificultar la labor del médico de urgencias y empeorar la calidad de la asistencia. Diseño: Estudio observacional, descriptivo, transversal. Muestra: Se recogen de forma voluntaria durante tres meses 935 hojas de derivación que traen los pacientes a urgencias remitidos desde 14 centros de salud del área y de ellos se seleccionan 310 al azar. Exclusiones: Aquellos volantes dirigidos a Ginecología o Pediatría. Ámbito: Pacientes asignados a un hospital terciario que asiste a una población de 340.000 habitantes. Método: Para valorar la calidad y adecuación de la derivación se analizan 21 variables: 7 administrativas (fecha, identificación del paciente y médico, hora de recepción, etc.) y 14 referidas a a la calidad de la historia clínica (antecedentes personales, enfermedad actual, exploración física, constantes, etc.) Utilizamos para ello estadísticos descriptivos. Resultados: Se revisan 310 volantes de los que 163 eran hojas de urgencias,100 eran de interconsulta y 47 eran P-10.Datos administrativos:en el 25,8% no figura la identificación del médico, en el 24,5% no figura el lugar de asistencia,en el 54,5% no está la hora de recepción. El 31% de los volantes estaban dirigidos al médico de cabecera o a alguna especialidad y en el 28% no consta. Datos clínicos: Los antecedentes personales sólo figuran en el 25,5%, las constants (dos o más) sólo en el 12,3%, la exploración física está presente en el 43%. El juicio diagnóstico está presente en el 41%.En el 90% de los casos no hay ninguna exploración complementaria. El 77% fueron remitidos a domicilio después de ser visitados en SUH, el 21% a especialistas y sólo el 2% ingresaron en el hospital. Conclusión: La calidad de la derivación procedente de Atención Primaria es muy deficiente. Es necesario una mejor comunicación desde primaria hacia SUH para mejorar la atención al paciente.

EL RETRASO PREHOSPITALARIO EN EL MANEJO DEL SÍNDROME CORONARIO AGUDO. PROYECTO ARIAM

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En el manejo extrahospitalario del síndrome coronario agudo(Infarto Agudo de Miocardio vs. Angor inestable)es muy importante el tiempo de demora entre el inicio de la sintomatología y la atención hospitalaria. Objetivos: Estudio del retraso prehospitalario,desde el inicio de los síntomas hasta la llegada al hospital de referencia,averiguando la influencia que tiene en esa demora la utilización de los sistemas sanitarios extrahospitalarios. Métodos: Estudio descriptivo evaluando motivo de ingreso,modo de acceso al sistema hospitalario y tiempo de demora,empleando para esta última la medida de la mediana.Entendemos por tiempo de demora el retraso desde el inicio de la clínica hasta la llegada al primer hospital. El período temporal abarca desde 1-Junio-01 hasta 31-Diciembre-2001;y se trata de pacientes incluidos en el PROYECTO ARIAM. Resultados: De un total de 113 pacientes,el 20% eran anginas inestables y el 80% IMA. El retraso global en la llegada al primer hospital fue de 135 minutos. Si el paciente acude directamente al hospital de referencia el retraso estimado es de 120 minutos aproximadamente (44,25% pacientes). Si el paciente acudía en primer lugar al sistema sanitario extrahospitalario el retraso es de 150 minutos,incluyéndose en este grupo 63 pacientes (55,75%). Conclusiones: La utilización de los sistemas sanitarios extrahospitalarios provoca un retraso en la atención hospitalaria de los pacientes con síndrome coronario agudo,aunque ésta es la forma más comúnmente empleada por dichos pacientes para acceder a la atención hospitalaria.

VALORACION DEL GRADO DE SATISFACCIÓN DEL PACIENTE Y SU FAMILIA, EN RELACIÓN AL PERSONAL DE ENFERMERIA DEL SERVICIO DE URGENCIAS DEL HOSPITAL JOAN XXIII

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Introducción: El proporcionar una buena calidad asistencial, implica, además de realizar los cuidados al paciente mediante una buena técnica, no olvidarnos de atenderlo de forma integra, respetando sus valores psíquicos, éticos y sociales. El objetivo de este estudio es valorar el grado de satisfacción del paciente / familia respecto a los cuidados y atenciones realizados por el personal de enfermería en el servicio de urgencias. Metodología. El estudio es cuantitativo, descriptivo y prospectivo. Realizado en el servicio de urgencias de ámbito hospitalario de 2º nivel asistencial, con una muestra de 66 pacientes y durante el mes de febrero del 2003. Los datos se obtienen mediante el diseño de una hoja de recogida y se analizan mediante de una hoja de calculo Excel y Forest & Trees . Las variables estudiadas quedan expuestas en los resultados. Conclusiones: podemos afirmar, que el personal de enfermería en el servicio de urgencias en nuestro hospital informa de manera satisfactoria al paciente y familia, respeta su intimidad y les atiende correctamente. Se observa que los resultados no son tan óptimos cuando se trata de la identificación por parte del personal y de la información que recibe el usuario sobre el funcionamiento y normas del servicio. No se observan diferencias relevantes en los resultados al separarlos por edad, sexo o situación paciente/familiar. Nuestro objetivo será esforzarnos en mejorar respecto a estos dos puntos para conseguir un mayor grado de satisfacción por parte del paciente/familia.

PREVALENCE OF DEEP VENOUS TRHOMBOSIS IN A BASIC HEALTH AREA: REVIEW OF 2003

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Background/Objectives: Deep venous thrombosis (DVT) is a pathology not easily detected in the hospital emergency room. We present our observations on 80 patients diagnosed within a period of six months. Methods: A cross-sectional, prospective study of over 31,000 patients in order to describe the age, sex, arrival method, d-dimer ELISA test (d-vidas) and their correlation with the pathology identified on an eco-doppler. Results: Our prevalence was 3,875 x1000 habitants (80/31000). 58 (72.5%) were female. The main age group in our study was the 60-74 year old group (41.3%). Most patients arrived by a non medical ambulance (87.5%) and by their own initiative. 41 patients (51.0%) had a positive d-dimer, 14 (17.5%) a negative value, 18 did not have a sample tested and 6 were missing values. 43 patients (53.1%) were discharged home, including 21 who had an positive d-dimer. Eco-doppler was positive in 41 patients (50.1%), 27(30.3%) were negative and 11 not reliable. Conclusions: Elderly women were more likely to have a DVT in our study. D-dimer in our hospital had a sensitivity value near 50% and there was a high correlation with the diagnostic eco-doppler. Half of our patients, especially those with distal DVT had an ambulatory treatment.

EMERGENCY MEDICINE TRAINING PROGRAM FOR REMOTE ZONES IN ARGENTINIAN PATAGONIA

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Patagonia is the southest extreme of America and one of the most beautiful places in the world. Bariloche lakes, Calafate glacier, the wales in Madryn and Ushuahia, the End of the World City are famous over the world. Even though it is a big region, 1000 km wide and almost 1800 km long, only 1.000.000. people live in it. In the Province of Chubut, the Health Minister with a group of Emergency Medicine physicians organized a specific Emergency Training Program for the remote zones of the province. This program was designed to improve the response of the small hospitals from where the patients, once stabilized are transferred to the regional Hospitals, not less than 4 hours by ambulance. It is important to consider that in 3 or 4 months of the year the snow covers a great part of the province, making it more difficult to call for aid, the response and the subsequent mentioned tranfer of the patient. The course Program is divided in two intensive days, 12 hours each. Transfer practical workshop, surveillance in cold zones and hypothermia are some of the topics developed in the course. 5 courses were performed during 2002 and more than 220 persons with different roles were present. 8 courses are planned during 2003 and improvement in patient assistance and transfer has been observed. Our slogan: no place is too far to be forgotten.

BUENOS AIRES COUNTY EMERGENCY MEDICAL SERVICE RESPONSE TO THE 19-20 DECEMBER 2001 STRIKES IN BUENOS AIRES ARGENTINA

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Argentinian economical and political situation became worse at the end of 2001, when Dr. De la Rúa President was facing the second half of his period. Groups of persons began to organize strikes asking for the President's dismissal. From the night of 19th December to the 20th afternoon the city was a battlefield between some of these groups who began to pillage, destroy buildings, banks, and the Security institutions' response. The Buenos Aires County Emergency Medical Service operation is analyzed. More than 300 patients were transferred to hospitals caused by the growing violence, apart from the regular activity of the System. During the afternoon of 20th, the historical Plaza de Mayo was the scenario of a three hours quarrel between the crowd and Federal Police. 6 persons were killed, with different sort of weapons. 183 patients were assisted and transferred to 5 hospitals. Many of them were admitted and needed a surgical intervention. The

System suffered three attacks: 2 Rapid response Units and an Ambulance were burnt by a political group called Quebracho. This type of event shows clearly the difficulties in evaluating the risks where the classic considerations about safety falls in the Asymmetric disbalance between the public.

MULTICENTER STUDY ON WAITING TIME IN ACCIDENT AND EMERGENCY DEPARTMENTS AT THE COMUNIDAD VALENCIANA

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INTRODUCTION-OBJECTIVES Accident and Emergency Departments (AED) have an infrastructure designed to provide quick and high quality assistance in severe pathologies. Due to this high technology patients with unimportant problems overuse them. We deem necessary to establish indicators that measure the acceptable waiting time in a high quality service. In this study the ideal indicators have been established to analyse the waiting time in several AED in hospitals at the Comunidad Valenciana as well as to draw a comparison of them. Objectives: To analyse the medical-care and medical-diagnosis waiting time in relation to severity of pathologies to measure the medical care quality in several AED. To compare several hospitals. METHODS Observational, multicenter, and prospective study carried out on weekdays. It was carried out in the first phase from December-2002 to June-2003, including all patients treated from 8 a.m. to 3 p.m. in AED. This study has been funded by a research grant from the Consellería de Sanidad. The participants are four AED of public hospitals at the Comunidad Valenciana. Patients are classified in: U1 critical U2 severe U3 mild severity U4 minor RESULTS MEAN TIME min Attendance 27.5 Diagnoses 46.25 Stay 74 Using multivariate regression analysis, we obtained a significant model with the following variables: Severity, in reference to patient U1 OR U4 = 7.69 OR U3 = 24,34 OR U2= 6,13 Triage, a benefit O.R. (no triage) = 2,38 %Patients / DO NOT achieve GOLD St. PAT. GR. % Max. Acc. Time Gold St. AED1 AED2 AED3 AED4 U1 1 1 ' 100 % 0,4 / 0 1,0 / 0 2,6 /15,4 1,0 /1,1 U2 6,7 5 ' 95 9,2/ 10,5 2,0 / 0 8,8 /48,8 7,9 / 3,4 U3 42 30 ' 85 49,2/51,2 48,8/68 27,2/ 0 28,7/13,4 U4 50 120 ' 75 41.2/0 48,3 / 0 61,4/ 0 62.4/37,1 CONCLUSIONS To relate waiting time with severity is a good method for quality control in AED. The trend must be to zero waiting time in-patients U1 and U2. Analysing the obtained data it is possible to reach a consensus on good care practice, and studying each AED it is viable to influence on the problems that cause a major delay depending on the severity of the pathology.

ACUTE PAIN MANAGEMENT IN EMERGENCY UNITS

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Acute pain is the most common cause of consultation at Emergency Departments. Analgesia is a fundamental aspect in the integrated management of the patient that goes to the Emergency Departments. The treatment of acute pain remains unsatisfactory despite advances in pain research and the publication of numerous guidelines. Objectives: 1) To describe the characteristics of patients that go to Emergency Departments in Hospitals. 2) To describe the characteristics of pain. 3) To describe pain treatment in Emergency Departments. Materials And Methods: Descriptive transversal study. Patients were evaluated at the beginning of the management in 15 Regional Hospitals of Spain, members of the Emergency Study Group of Regional Hospitals (GEMUHC). The research was carried out over three periods of 24 hours. Patients were evaluated by a pain questionnaire and the Visual Analog Scale (VAS) was used to measure pain intensity. Results were analysed by a descriptive and analytic method. Results: The results have been expressed in terms of number of cases in which that variable was studied and percentage. The total sample consisted of 3575 patients who went to Emergency Units. 49.8% were men and 50.2% were women. The average age was 39 years (DE: 24.5). Pain was the main cause of visiting the Emergency Unit in 52.3% of cases and 59.6% of patients said that they had pain when they were asked about it. Pain was significantly related to marital status ($p<0.000$), socio-economic status ($p<0.001$), educational level ($p<0.000$) and area of residence ($p<0.000$). Pain was more common in the working population (70.7%), married people (64.5%), primary education (70%) and the non-urban population (67.5%). Main characteristics of pain were: acute pain in 90.5% (n=2063), continuous pain in 75.8% (n=1849) and in 59% of the sample there was also inflammation (n=244). The average intensity of pain was 51 (VAS) and 19.2% of patients had a VAS > 7. The most frequent locations of pain were in the lower limbs (19.5%)and the abdomen (18.8%) (general abdominal pain and epigastric pain). Cephalea was present in 16.5% of cases and usually it was of the whole head. Pain treatment was carried out in 37% of patients (n=2018) and the most frequent treatment was ketorolac (28.2%), metamizol-dipyrona (22.6%) and two or three drugs simultaneously (18.7%). 44 patients (6.3%) were treated with opioids and tramadol was the most frequent used (4.8%). There were significant differences related to the intensity of pain ($p<0.004$), resulting in the use of more than one drug simultaneously in patients with VAS scores greater than 7. Patient satisfaction with previous analgesic treatment was low in 49.2% of cases. Conclusions:

- Pain is the main symptom of patients attending at Emergency Department
- The most frequent characteristics of pain suffered were: acute pain, continuous pain, intense pain. The most common sites of pain were lower limbs and abdomen.
- The number of patients actually treated for pain was very low. The use of opioid analgesics in Emergency Departments was very low although pain intensity was rated as high in 19.2% of cases.
- The intensity of pain was the variable used to determine the type of the treatment.

PAPEL DEL SERVICIO DE URGENCIAS EN LA HOSPITALIZACION DOMICILIARIA: UN VALOR AÑADIDO A LA ASISTENCIA HOSPITALARIA EN EL DOMICILIO

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Objetivo: Se decide valorar, tras algo más de 4 años de funcionamiento, el nº de pacientes hospitalizados a domicilio que han necesitado en algún momento de su ingreso asistencial en el Servicio de Urgencias (SU), el nº de retornos y los beneficios que se hayan podido derivar. Metodologia: Estudio retrospectivo que abarca desde el 16 de noviembre del 98, fecha en que se implementa la Unidad de Hospitalización a Domicilio (UHD) en nuestro hospital, hasta el 31 de diciembre del 2002, donde se valora el nº de pacientes ingresados en régimen de hospitalización domiciliaria (HD) que tuvieron que ser atendidos en el SU, así como el nº de retornos (vuelta al hospital), las causas que los motivaron, las patologías prevalentes implicadas por orden de frecuencia, el Servicio de procedencia de los pacientes y los beneficios de la colaboración asistencial del SU con la UHD. Resultados: Durante el período estudiado se dieron 795 altas: 547 procedían de MI, 197 del SU, 31 de Cirugía Vascular (CV), 8 de Neumología (PN), 3 de la Unidad de Corta Estancia (UCE), 3 de Traumatología (COyT), 2 de Cardiología (CARD), 1 de Consultas Externas (CCEE), 1 de Cirugía General (CG), 1 de Oncología y 1 del Domicilio. ? 45 pacientes (5:66%) fueron visitados en el SU: 30 de MI (66.6%), 13 del SU (28.9%), 1 de CG (2.22%) y otro de CV (2.22%). ? En este período se indicaron 54 retornos al hospital (no todos fueron visitados previamente por el SU): 41 procedían de MI (76% del total). De estos 41 pacientes, 21 lo decidió el médico del SU (51.2%) y 20 el de la UHD (48.8%); 11que procedían del SU lo indicó el médico del mismo servicio SU (4%); 1 de CARD (1.85%) y otro de PN (1.85%) retornaron directamente desde la UHD. De los 54 retornos, 31 (57.4%) eran broncópatas, 15 (27.7%) cardiópatas, 7 (12.9%) con un proceso infeccioso y 1 (1.85%) hepatópata. ? Causas de retorno: 24 por empeoramiento (44.4%), 6 por claudicacione del cuidador (11.1%), 5 por deseo del paciente y/o familiar (9.26%), 18 por nuevos problemas no controlables en el domicilio (33.3%) y 1 por malos cuidados (1.85%). ? Por sexo: 28 mujeres y 26 hombres (=1.07) con una media de 74.5 años y rango 44-91. ? Indice de retornos 54/795 (6.79%): MI 41/547 (7.5%), SU 11/197 (5.58%), CARD 1/2 (50%), PN 1/8 (12.5%). ? Fallecieron 3 de los pacientes (5.55%) que fueron devueltos al Hospital: 1 en el SU durante un procedimiento, y los otros 2 en MI al cabo de pocos dias. ? El 91% de los retornos asistidos en el SU admitieron estar muy satisfechos con la celeridad con que recibieron asistencia y el 74% afirmaron que volverían a ingresar en régimen de HD. Conclusiones:. Hemos podido comprobar que un 5.66% de los ingresados en HD ha sido atendido en algún momento en el SU dando lugar a 45 visitas efectuadas y 31 retornos al Hospital, lo que demuestra la necesidad de contar con la colaboración del SU para asegurar una asistencia continuada y con garantías suficientes. Por otro lado cabe destacar que una gran mayoría de los cuidadores ha sabido utilizar de forma correcta el SU, tal como se les había instruido. El dato de que claudicaron más los cuidadores de los pacientes procedentes del SU (3/11: 27.27% vs 3/41: 6.66% de MI) se debe probablemente a que los pacientes, cansados de tantas horas en el SU, sin posibilidad inmediata de cama y con sensación de mejoría, desean ir a casa convenciendo al cuidador que, una vez allí,se siente desbordado. Por último, llama la atención el alto grado de satisfacción y el porcentage aceptable de pacientes (74%) que respondieron que estarían dispuestos a reutilizar la HD por la sensación de seguridad y atención recibida cuando se sintieron mal, atribuyéndolo a la rapidez con que fueron atendidos y a la buena evolución de su proceso.

SCREENING THROMBOEMBOLIC DISEASE IN THE EMERGENCY DEPARTMENT: COMBINED USE OF "D" DIMER LEVELS AND WELLS PROBABILITY SCALE

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Aim: To assess the role of the determination of D dimer levels in the diagnosis of deep venous thrombosis (DVT) and Pulmonary Embolism (PE) in patients attending to the Emergency Department (ED) of our hospital. Methods: Study design: A prospective, observational study I planned, to evaluate a diagnostic strategy for DVT and PE Sample size and study patients characteristics: 124 patients older than 18 year presenting with symptoms compatible to DVT/PE attending to an 8000 cases/year ED were included from May to October 2002. Diagnostic procedures: After a clinical questionnaire and physical examination all patients were classified according to their probability of suffering from DVT/PE using the Wells scale. In every of them D dimer plasmatic levels were obtained. As a consequence of the results of D dimer levels determination and Wells scale other examinations like Echo Doppler and/or phlebography for patients suspected of having DVT or V/Q gammagraphy or helicoidal CT for patients suspected of having PE were performed The evaluation of the results of every single examination was made by independent doctors that did not know the results of the clinical probability assessment (clinical questionnaire, physical examination, Wells scale and D dimer determination). D dimer determination: Immunoassay Clinical follow-up: After completion of TVP/PE protocol Discharge or Hospital admission is decided and a 3 month clinical follow-up is initiated recording confirmation or not of clinical suspicion, complications or other diagnoses. Statistical analysis: A descriptive sample analysis has been made, including central tendency a dispersion parameters and frequency distribution. Data from patients having low to intermediate probability of TVP/PE are analysed separately. Te following parameters has been also studied: Sensitivity (Se), Specificity (Sp), Positive Predictive Value (PPV), Negative Predictive Value (NPV), Positive Likelihood Ratio (L+), Negative Likelihood ratio (L-) and Test Efficacy. RESULTS: Data of 142 patients were analysed (64 men and 78 women). 44,36 of them were in the range of 66-85 year old Among patients with clinical suspicion of PE considered low to intermediate, dimer D plasmatic levels determination showed a Se of 100%, Sp of 43,28%, NPV of 100% and L- of 0 Among patients with clinical suspicion of DVT considered low to intermediate, the abovementioned D dimer determination showed a Se of 83,33%, Sp of 51,66%, NPV of 96,87% and L- of 0,32 Conclusions: 1.- Grouping patient with low and intermediate probability improves the usefulness of Wells scale in decision making. 2.- To associate Wells scale (low and intermediate probability) and D dimer determination constitutes a good way for screening thromboembolic disease in ED, lowering the rate of utilisation of other diagnostic tools (Echo-Doppler or phlebography) and empiric treatment approaches.

PRESION ASISTENCIAL URGENCIAS INTRAHOSPITALARIAS

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Objetivo: Reside en valorar el número y caracteristicas de las asistencias realizadas en pacientes hospitalizados(PH) durante el año 2002. Metodologia: Se ha realizado un estudio prospectivo de los episodios de asistencia a PH.Nuestro centro dispone de 214 camas. El horario laboral de los médicos de los servicios comprende entre 8-15 h. A partir 15h, Urgéncias dispone de 3 internistas,1 cirujano,1 traumatólogo y 1 intensivista. En 2002 se incorporó un internista entre las 15-21 h dias laborables. La recogida de información se realizó mediante un registro diario de asistencias. Resultados: Se han realizado 37517 urgencias extrahospitalarias y un total de 3499 visitas PH, con un total de 647 visitas control (total 4146 asistencias PH). Principales motivos:A-Patologia médica aguda: 2133 avisos, Dolor toràcico (13.7%), Disnea (12%), Fiebre (10.6%), Desorientación (7%). B-Relacionados con tratamientos: 573 avisos, Pauta Sintrom (25.3%), Modificar tratamientos (21.9%). Tratamientos en programados (12.4%), Analgesia (7.1%) C-Relacionados acceso vascular: 142 avisos, Extravasación via venosa (92.9%) D-Motivos legales-administrativos: 190 avisos, Confirmar Exitus (78.9%), E-Control resultados: 413 avisos, Analisis (64%), Radiologia (7%) F-Información: 48 avisos. Informar familiars (77%). Se han solicitado 1166 pruebas complementarias, se han realizado 40 traslados a UCI/Urgencias. Total tiempo invertido 786 horas (promedio 13 min/asistencia). El dia con mayor número de avisos es el Viernes (8.6 avisos/dia) y en festivos asciende hasta 16.8.Entre las 15-21 h se han realizado el 58.8% de las asistencias. Conclusiones: La atención intrahospitalaria constituye una clara presión asistencial para los servicios de urgencias, especialmente durante los viernes y festivos. El tiempo invertido para su realización debe ser considerado en la distribución de los recursos humanos en urgencias. El análisis de los motivos.

HYPERKALEMIC CARDIAC ARREST AFTER REPEATED SUCCINYLCHOLINE USE IN A PATIENT WITH RENAL INSUFFICIENCY

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Background: Succinylcholine can induce a mild and transient increase in serum potassium (K+) levels of approximately 0.5-1.0 mEq/L occurring over 10-15 minutes. Although certain populations of patients who receive succinylcholine are more susceptible to increases in serum K+ levels (ie. neuromuscular dystrophies, burn patients), there is a consensus by anesthesia that succinylcholine use in patients with renal failure is safe. We report a case of an ESRD patient who had a cardiac arrest in the setting of hyperkalemia shortly after intubation. Case Report: A 1 year-old boy with a history of ESRD on hemodialysis S/P rejected renal allograft, severe cardiomyopathy, presented to the ED with cough and vomiting. In the ED the patient was ill-appearing and tachypneic. Initial vital signs: BP=1450/90 mmHg, P=144 bpm, T= 36.0°C, PO2 sat = 93% on room air O2. PE was significant for decreased breath sounds at the right lung field and tachycardia with a laterally displaced PMI. A chest –XR revealed a right upper and lower lobe infiltrates. The patient was initially treated with O2, nebulized albuterol, and IV antibiotics. He was intubated with ketamine 2.5 mg/kg and succinylcholine 3 mg/kg and midazolam 0.1 mg/kg due to worsening respiratory status. Because of movement while on the ventilator the patient was given another dose of ketamine and succinylcholine. In the PICU he desaturated and his heart rate decreased below 40 bpm. His laboratory data revealed: K+ = 7.4 mEq/L, Cr=9.2 mg/dl, Mg++ 3.4 mg/dL, lactate 1.2 mmol/L, arterial pH=7.29, pCO2= 42 mmHg, pO2 =148 mmHg, WBC=15, 800/mL. After CPR and treatment for hyperkalemia the patient's ECG and vital signs normalized. Conclusions: Succinylcholine may cause transient hyperkalemia. Repeated doses of succinylcholine in the patient presented may have contributed to a cardiac dysrhythmia and should be avoided in patients with renal impairment.

PRIVACIDAD E INTIMIDAD, EN LAS RELACIONES MEDICO-PACIENTE. BASES PARA LA HUMANIZACIÓN DE LOS SERVICIOS DE URGENCIAS

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Introduccion: La relación clínica está insertada en el ámbito de lo íntimo, de lo privado de la persona atendida. El respeto a la intimidad y privacidad durante la asistencia sanitaria es una necesidad cada vez más sentida por los usuarios, como queda reflejada en numerosas encuestas los profesionales sanitarios de las urgencias contemplar estas expectativas en nuestras actuaciones. Objetivos: Mediante el análisis de expectativas, demandas y satisfacción de los ciudadanos. Establecimiento de medidas que hagan posible la privacidad e intimidad de los usuarios, con el objetivo de proveer asistencia personalizada, integral y de calidad a los ciudadanos. Concienciación del personal, mediante la puesta en marcha de la Guía de Humanización del Servicio de Urgencias. Metodos: Se realiza análisis retrospectivo y descriptivo de las reclamaciones en los años 1999-02, estudio de "La calidad percibida por los clientes del Hospital", realizada por EASP. Estudio de los datos de actividad de los últimos tres años, recogidas de la base de datos del Hospital. Realización de grupos focales de trabajo interdisciplinarios. Estudio observacional de nuestras actitudes. Realización de Seminarios a todos los niveles Resultados: Asistidos: 1999: 85370, 1999: 90834, 2000: 98490, 2001: 104751. Nº reclamaciones (reclamaciones/1000): 1999: 49(0'54), 2000: 50(0'50) 2001: 52(0'49)2002 Causas: Retraso asistencia: 50%, discordancia diagnóstica/ tratamientos: 23%, falta de amabilidad, intimidad, visitas: 27%. Encuestas de satisfacción 1999-EASP-: Valoración científico técnica 92%. Apartado Información, arquitectura, hoteleras, intimidad: 60%. Media diaria/ mes media más alta Agosto: 1998: 234(324), 1999: 245(345), 2000: 269(358). Estimación demanda 2001-05: incremento medio estimado7'16%: 2001: 105542, 2002: 113099, 2003: 121197, 2004: 129874, 2005: 139173. Estancias observación asistidos/ Tiempo medio:1998: 17000/19'9%/4'52 h, 1999: 16986/18'9/ 4'31 h, 2000: 19005/19'21/6'28. 4'1/5'8, pediatría 19'4/19'5. Resultados Grupos focales: realización de Plan intimidad y privacidad 2001. Puesta en marcha de programas de formación 2002: realización de seminarios de concienciación. Conclusiones: El análisis de las reclamaciones es una herramienta fundamental para conocer la opinión de pacientes y familiares proporcionando una información muy valiosa

acerca sus expectativas. La calidad percibida por los pacientes mejora sustancialmente si se ponen en marcha mecanismos para preservar la intimidad-privacidad. Son fundamentales los programas de formación del personal que contemplen la relación de respeto y confianza entre pacientes y personal. Los cambios funcionales deben incorporar mecanismos que permitan mejorar la intimidad-privacidad de los pacientes.

ASISTENCIA DE LAS CAIDAS DEL ANCIANO EN URGENCIAS

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Objetivos: 1. Determinar la causa más frecuente de caída del anciano y sus consecuencias. 2. Realizar un perfil del anciano que acude por caída. Metodologia: Diseño: Estudio descriptivo transversal. Periodo de estudio: Mes de Octubre. 2002. Ámbito del estudio: Unidad de Urgencias de un Hospital Comarcal. Sujetos: Todos los pacientes mayores de 65 años que acudieron a Urgencias por caídas. Mediciones: Se recogieron los datos mediante encuesta personal con las siguientes variables: Edad, Sexo, Enfermedades incapacitantes o no, Vida previa: Cama-Cama, Cama- Sillón, Independiente, Motivo de la caída: Accidental o Secundario a patología orgánica, Diagnóstico, Tratamiento, Destino final. Métodos: Se aplicó medidas de tendencia central, frecuencias y posteriormente se realizó análisis estadístico. Resultados: Se recogieron los datos de 192 ancianos que acudieron a Urgencias por caídas. La edad media era de 73,6 años DT; 8,6, el 35,5% eran Varones y el 64,5% mujeres. El 82,3% de los pacientes no tenían ningún proceso que lo invalidasen, el resto (17,7%) presentaban problemas hemipléjicos y demencias, el 87,1% llevaban una vida Independiente, el 8,1% vida cama-sillón y el 4,8% vida cama-cama. Los pacientes referían como causa de la caída en el 85,5% accidental y en el 14,5% fué secundario a un proceso orgánico(ACV, Sincopes vasovagales y secundarios a arritmias). Las consecuencias tras la caída fueron: el 53,2% contusiones-esguinces, el 26,3% fracturas (6,5% F de fémur, 6,5% F de Colles, 8,1% F de Tobillo, 3,1% F de hombro, 2,1% otras fracturas), el 12,9% Traumatismos craneo-encefálicos, 6,1% policontusionados, 1,6% luxaciones de Hombro. Se realizó tratamiento médico en el 88,7% y un 11,3% quirúrgico. Tras la asistencia inicial en Urgencias el 64,5% se deriva a su domicilio y control en Atención Primaria, el 17,7% se ingresó, 17,7% se derivó a Consultas Externas de Traumatología. Tras el análisis estadístico se halló que los pacientes con mayor edad (81,8 años DT10,5) tenían más incapacidades y una vida de cama-cama (Edad media 92,6 años DT1,5) y a menor edad más independencia (72,2 años). Las mujeres tenían mejor calidad de vida previa y tienen con más frecuencia fractura que los hombres sobre todo la fractura de Colles. Los de mejor calidad de vida tienen menor posibilidad de fracturas. Los de mayor edad y peor calidad de vida presentan más fracturas pero menos porcentaje de intervenciones quirúrgicas. Conclusiones: 1. La causa más frecuente de caída en los ancianos es de forma accidental y como consecuencia presentan contusiones leves. La patología orgánica como causa de caída es debida a Accidentes cerebro vasculares y a sincopes. 2. El perfil del anciano que se cae es de unos 73 años con buena calidad de vida, que se cae de forma accidental, que se presenta contusiones y es derivado a su domicilio / Atención Primaria con tratamiento médico. 3. Los pacientes con antecedentes invalidantes tienen más frecuencia de fracturas aunque con menos probabilidad de intervención quirúrgica. 4. Las fracturas más frecuentes son: Tobillo, Cadera y Colles.

AGRESIÓN EN INMIGRANTES. UN PROBLEMA SOCIAL EN URGENCIAS

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Introducción: La inmigración está sufriendo una evolución social que repercute indudablemente, en el tipo de demanda de estos pacientes en nuestros Servicios de Urgencias Hospitalarios. En los últimos tiempos se ha observado un aumento de las agresiones en pacientes inmigrantes, tras ellas se esconde un profundo problema social. OBJETIVOS: Describir la agresión en pacientes inmigrantes, perfil clínico del paciente agredido, determinar factores de riesgo. Material y Métodos: Se ha realizado un estudio prospectivo durante el periodo comprendido Junio-2002 hasta Febrero-2003. Se ha realizado una encuesta personal, a todo paciente inmigrante agredido, la cual incluía datos administrativos, clínicos y sociales. Se obtuvieron un total de 276 casos. Posteriormente se realizó análisis con métodos estadísticos de variables continuas se utilizó medidas de tendencia central y de dispersión y para categóricas descripción de tablas de frecuencia. Resultados: El 86,4% de los pacientes agredidos eran varones, el 13,6% mujeres. La edad media era de 27,4 ± 10,2 años. Respecto al país de procedencia el 70.1% eran de Marruecos, el 22,7% de países del este, el 6,4% Subsaharianos. Su estancia media en España es de 18,4 meses y su situación laboral es parado en el 61,43% (en el momento de la consulta). Si hablamos del tipo de agresión el 72,1% son cuerpo a cuerpo sin la presencia de objetos contundentes, el 18,6% por arma blanca, objeto cortante u objeto punzante y el 9,3% agresiones sexuales. La localización de las heridas un 37,6% en la cabeza, el 20,8% en el tronco y un 9,3% en extremidades, si comentamos el tipo de lesión 80,2% contusiones y hematomas, el 22,8% heridas inciso-contusas, el 8,3% heridas penetrantes y un 4,3% fracturas de diversa consideración. Respecto a la Prioridad de la atención un 61,4% fueron prioridad 3, prioridad 2 un 26,6%, prioridad 1 un 12%. El 36,7% presentaban signos de intoxicación alcohólica y un 32,1% reconocieron haber tomado algún tipo de droga. Respecto al motivo de la pelea el 39,4% fue por discusión bajo los efectos del alcohol o drogas, un 30,6% por robo, el 12,6% problemas de pareja, el 9,3% agresión sexual, un 6% mafias y un 2,1% relacionado con el trabajo. El 87,2% fueron derivados a su domicilio en el momento del alta. Cuando le preguntamos por el agresor/es un 96,2% eran también inmigrantes de su propia nacionalidad o bien de otra. La mayor tasa de incidencia la encontramos los viernes, sábados y vísperas de festivos con un 86,7% siendo la franja horaria más frecuentada entre las 01 horas hasta las 05 horas a.m. Conclusiones: En general el paciente inmigrante agredido es un varón joven marroquí con una estancia en España de más de un año con precaria situación laboral. Afortunadamente en la mayoría de los casos las agresiones son de carácter leve, necesitando sólo un bajo porcentaje ingreso hospitalario. Reseñar como ciertos hábitos tóxicos como problemas sociales de fondo (precariedad, inestabilidad laboral) favorecen en gran medida el aumento de incidencia de agresiones. Es llamativo el hecho de que las agresiones son producidas por otros inmigrantes siendo bajísima la tasa de agresiones por

autóctonos de la zona lo que nos indica una buena convivencia y bajo nivel de conflictividad con esta población.

BRUCELOSIS AGUDA EN URGENCIAS DE UNA ZONA ENDÉMICA

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La Brucelosis es una infección originada por bacterias del género Brucella. La Brucella más frecuente en nuestro medio es la B. Melitensis (cabra / oveja). En el hombre, esta infección se produce por contactos profesionales con un animal infectado o por ingesta de leche, productos lácteos o tejidos infectados. Los síntomas suelen ser inespecíficos, como fiebre sin foco aparente, malestar general, poliartralgias, y pérdida de peso, muchas veces sin signos físicos, lo que hace difícil su sospecha diagnóstica. Objetivos: 1.Determinar la vía de transmisión y los síntomas más frecuentes de presentación de Brucelosis. 2.Comprobar si existieron falsos positivos de la Prueba diagnóstica Rosa de Bengala. 3. Determinar las complicaciones más frecuentes. Diseño: Estudio descriptivo transversal. Periodo Del Estudio: Del 1 de Enero de 2001 al 15 de Noviembre de 2002. Ámbito Del Estudio: Unidad de Urgencias de un Hospital de Primer Nivel de la Junta de Andalucía. Sujetos: Pacientes diagnosticados de Brucelosis Aguda tras el Test de Rosa Bengala Positivo. Mediciones: Se recogieron de las Historias Clínicas con Rosa Bengala Positivo las siguientes variables: Edad, Género, Profesión, Vía de transmisión, Síntomas, Duración del cuadro, Serología, Complicaciones y Tratamiento. Metodos: Se utilizaron medidas de tendencia central, tablas de frecuencias y posteriormente se realizó análisis estadístico mediante paquete estadístico SSPS versión 8.0. Resultados: Se recogieron 38 pacientes diagnosticados de Brucelosis Aguda en la Unidad de Urgencias, 30 eran varones con una edad media de 41+ 5,3 años y 8 mujeres con edad media de 43+ 6,8. Agricultor era la profesión más frecuente con 25 de los pacientes, 7 eran Comerciantes, 4 Amas de casa, 2 Funcionarios. De los pacientes, 22 reconocían ingesta de productos lácteos y 2 de carne de cabra / oveja. El resto niega ingesta pero sí contacto con cabra / oveja. El síntoma más frecuente es la Febrícula de 13+ 6,4 días en 32 de los pacientes, Malestar general / Astenia en 30 de los pacientes, Sudoración en 19, Poliartralgias 14, Cefalea 6, Lumbalgia 5, Otros síntomas: 9. El 100% de los pacientes dieron Títulos de Anticuerpos a Brucella positivos. Solo 6 pacientes tuvieron complicaciones: Sacroileitis en 4 de los pacientes, Osteomielitis vertebral en 1 paciente, Meningo-encefalitis en 1 paciente. El tratamiento de elección es la combinación de Doxiciclina v.o (100 % de los pacientes) más estreptomicina i.m(18pacientes) o Rifampicina v.o (12 pacientes) o Moxifloxacino v.o(8 pacientes). Conclusiones: 1.La Brucelosis es más frecuente en varones agricultores con edad media de 41 años, lo que se contradice con la bibliografía que refiere más frecuencia en ganaderos, pastores y carniceros. 2.La Vía de transmisión más frecuente es la ingesta de productos lácteos de cabra / oveja. 3.El paciente acude a Urgencias por febrícula, malestar general / astenia, sudoración, poliartralgias. 4.El Test Rosa de Bengala es una prueba diagnóstica eficaz y barata. 5.La Sacroileitis es la complicación más frecuente. 6.El Tratamiento de elección es la combinación de Doxiciclina con Estreptomicina / Rifampicina o Moxifloxacino. 7.Ante todo Síndrome Febril de 2 o 3 semanas de evolución sin foco aparente debemos pensar en la Brucelosis como diagnóstico diferencial.

SOSPECHA DIAGNOSTICA DEL TROMBOEMBOLISMO PULMONAR

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Objetivos: Determinar que enfermedades predisponen el riesgo de tener un Tromboembolismo pulmonar (TEP). Analizar cuales son los síntomas más frecuentes de presentación, medios diagnósticos y tratamiento inicial del TEP. Metodologia: Diseño: Estudio descriptivo transversal. Periodo del estudio: Del 1998 al 2002. Ambito del estudio: Unidad de Urgencias. AIG. Cuidados Críticos y Urgencias. E.P. Hospital de Poniente. El Ejido. Almería. Sujetos: Pacientes diagnosticados de TEP en el periodo de estudio. Mediciones: Datos recogidos de las historias clínicas. Se estudiaron las siguientes variables; Edad, Sexo, Antecedentes Personales, Clínica, Métodos diagnósticos complementarios, Tratamiento inicial. Método: Se aplicó medidas de tendencia central, frecuencias y posteriormente se realizó análisis estadístico. Resultados: Se recogieron 48 pacientes con TEP de los cuales el 52% eran hombres y el 48% Mujeres, la edad media de los pacientes era de 62,08 DT 18,6 años. Los antecedentes personales que presentaban: el 96% fumador-exfumador, el 56% Hipertensión arterial, el 54% Insuficiencia venosa periférica, Dislipemia 32%, EPOC/ASMA el 16%, Diabetes 18%, Cardiopatía isquémica 19%, el 4% Anticonceptivos orales. El 87% presentaban dos o más enfermedades asociadas. Los síntomas que referían los pacientes: Disnea súbita en el 54%, Dolor torácico 22%, Disnea súbita más Dolor torácico el 22%, dolor gemelar 18%, Otros: dolor costal, cansancio.etc. Las pruebas diagnosticas que se realizaron: El Dimero D en 66 %se realizó, resultando positivo mayor de 500 en el 92%, 28% TAC Helicoidal(Señalar que hasta hace seis meses no se disponía en nuestro hospital de TAC Helicoidal), 12% Gammagrafía (Hospital de referencia), 6% Arteriografía (Hospital de referencia), 54% Eco Doppler de miembros inferiores. El tratamiento incialmente el 88% fue de HBPM. Los pacientes más jóvenes eran mujeres que utilizaban anticonceptivos orales y presentaban hábito tabáquico. Los pacientes que se realizaron Eco Doppler de miembros inferiores presentaron clínica de dolor gemelar en días previos al TEP y el 57% presentaban trombosis en el sistema venoso profundo. Conclusiones: 1. Los factores de riesgo de la TEP: Tabaquismo, Hipertensión, Insuficiencia venosa periférica, Dislipemia, Diabetes. 2. El reposo absoluto en este tipo de enfermos favorece el TEP. 3. En mujeres jóvenes señalar que el tabaquismo y los anticonceptivos orales son incompatibles, favoreciendo la aparición del TEP. 4. Los síntomas más frecuentes de aparición son: la Disnea súbita y el dolor torácico. 5. El diagnostico se basa en una sospecha clínica y complementada con pruebas de laboratorio como el Dimero D y radiológicas, teniendo gran relevancia el TAC Helicoidal. 6. El tratamiento inicial de elección del TEP es la HBPM a dosis terapéuticas.

¿CONOCEMOS COMO SE MANEJA LAS URGENCIAS HIPERTENSIVAS?

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Objetivos: Determinar el perfil clínico del paciente que acude al servicio de urgencias por crisis hipertensiva. Conceptualización. Manejo y tratamiento. Material Y Métodos: Estudio prospectivo realizado en el periodo comprendido entre Marzo-2002 hasta Febrero-2003. Se obtuvieron un total de 620 casos. Se ha realizado una encuesta personal, a todo paciente con crisis hipertensiva, la cual incluía datos administrativos, clínicos y sociales Posteriormente se realizó análisis con métodos estadísticos de variables continuas se utilizó medidas de tendencia central y de dispersión y para categóricas descripción de tablas de frecuencia. Resultados: El 56,2% de la muestra eran mujeres, el 43,8% eran hombres, la edad media era 56,3± 17,3 años. El 81,3% de los pacientes fueron derivados desde A. Primaria con el diagnóstico de crisis hipertensivas en el 82,1%, dónde fueron tratados con Captopril el 79,8%, con Nifedipino el 12,4% y un 8,6% con furosemida i.v. o i.m. Respecto a los factores de riesgo vascular el 68,2% eran obesos, un 48,3% hiperlipémicos, 42,1% diabéticos tipo II, 76% sedentarios, 37,5% fumadores, 28,5% bebedores de alcohol. Pudimos constatar que el 41,8% no cumplían el tratamiento correctamente, el 18,6% nunca han sido diagnosticados de hipertensión Respecto a las cifras de tensión arterial media eran T.A.S 192±26,3 mmHg; T.A.D. 110,3±20,1 mmHg; P.P 70 mmHg. Respecto a las pruebas complementarias un 68,2% presentaban signos de hipertensión en el ECG. Un 35,4% signos radiológicos, un 60,5% afectación visceral crónica de la enfermedad hipertensiva (alt. ECG, alt. Rx, alt. Fondo de ojo, microalbuminuria.) Y un 19,2% afectación de órganos diana de forma aguda. En nuestro servicio de urgencias fueron catalogadas un 61,29% como urgencias hipertensivas, un 19,21% de emergencias hipertensivas y un 9,5% de falsas urgencias hipertensivas. Respecto al tratamiento un 72,4% se resolvieron con un primer escalón terapéutico necesitando el resto del tercer escalón para su control, necesitaron ingreso hospitalario un 10,6% de los pacientes. Conclusiones: El paciente con crisis hipertensivas suele venir derivado desde A. Primaria, con un primer escalón de tratamiento (observar el desplazamiento del Captopril sobre el Nifedipino). Habría que destacar la falta de conceptualización a la hora de definir la crisis hipertensiva, lo cual agilizaría la actuación en el S.U.H. Por lo general suele ser una mujer entre la quinta y la sexta década de la vida con asociación de patología concomitante y factores de riesgo mal controlados (no olvidar los malos cumplimentadores de tratamiento y los no diagnosticados de hipertensión), ya con afectación visceral de su proceso hipertensivo. Respecto a la gravedad un porcentaje necesita de hospitalización, aunque la mayoría se controlan con una buena estrategia terapéutica. Destacar que en nuestro servicio de urgencias el segundo escalón terapéutico es sólo utilizado en casos muy específicos, controlando perfectamente la mayoría de las crisis hipertensivas con el primer y tercer escalón.

COMPARACIÓN DE LOS PACIENTES CON NEUMONÍA COMUNITARIA CON INGRESO EN LA UNIDAD DE CORTA ESTANCIA DE URGENCIAS Y LAS UNIDADES DE HOSPITALIZACIÓN CONVENCIONAL

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Introducción: La neumonía es uno de los diagnósticos de alta prevalencia en urgencias. La obertura de Unidades de Corta Estancia de Urgencias (UCEU) como soporte a los Planes Invernales abre la posibilidad de manejar este tipo de entidades en dispositivos asistenciales alternativos a la hospitalización convencional. Objetivos: Comparar datos clínicos, gravedad al ingreso, días de estancia y seguridad entre la población de pacientes atendidos en la UCEU respecto a los atendidos en unidades de hospitalización convencional (UHC). Nuestra UCEU dispone de 24 camas y es operativa de Noviembre a Marzo. Material y métodos: Estudio retrospectivo de todos los pacientes ingresados en nuestro hospital con el diagnóstico de neumonía comunitaria. Se excluyeron los pacientes con criterios de ingreso en U.C.I. y los diagnosticados de neumonía aspirativa o neumonitis obstructiva. Se revisaron las historias clínicas y la base de datos del hospital, comparando el grupo de pacientes ingresados en la UCEU con el que ingresó en unidades de hospitalización convencional (UHC). La gravedad al ingreso se evaluó mediante la escala de Fine. El período de estudio fue desde el 13 de noviembre de 2002 al 15 de febrero del 2003. Resultados: Durante el período de estudio se documentaron 105 pacientes con el diagnóstico de neumonía comunitaria, 26 ingresaron en la UCEU y 79 en UHC. La distribución por edad y género fue: UCEU media de edad de 70(±12), 18 (69%) hombres y 8 (31%) mujeres, en el grupo UHC, media de edad de 67 (±13), y 50 (63%) hombres y 29 (37%) mujeres. La gravedad al ingreso del grupo UCEU comparado con UHC mostró, respectivamente: Fine II: 2/26 (7%) vs 16/79 (20%), Fine III: 13/26 (50%) vs 23/79 (29%), Fine IV: 11/26 (43%) vs 28/79 (36%), Fine V ninguno en grupo UCEU vs 12/79 (15%) en el frupo UHC. La etiología microbiológica fue documentada en el grupo UCEU en el 15% (5/32) y en el UHC en el 45% (36/79). La estancia media en el hospital del grupo UCEU fue de 3,2 (± 1,14) por 10.9 (± 4.7) del grupo UHC. La tasa de mortalidad fue de 0 en la UCEU y de 2/79 (2.5%) en las UHC. Todas los pacientes del grupo UHC fue alta a domicilio, de los 25 pacientes del grupo UCEU, 8 lo fueron bajo supervisión del equipo de hospitalización a domicilio (HAD), 2 a una unidad de subagudos y dos a una unidad de agudos. A los 10 días del alta hospitalaria, la tasa de revisitas a Urgencias fue en el grupo UCEU del 4 % (1/26) con una tasa de reingreso hospitalario del 4% (1/26), por una tasa de revisitas del 2,5 % (2/79) y de reingreso hospitalario del 2,5% (2/79) del grupo UHC. Conclusiones: Como era de esperar los dos grupos son muy diferentes en nº total de casos lo que representa una limitación al estudio. En cualquier caso la UCEU con el complemento de la HAD es un recurso seguro para el ingreso de pacientes con neumonía incluso en el grupo Fine IV, reduciendo considerablemente la media de estancia.

THERAPEUTIC APPROACH TO SYMPTOMATIC HYPERLACTATAEMIA AND LACTIC ACIDOSIS IN HIV PATIENTS UNDER NUCLEOSIDE ANALOGUE REVERSE TRANSCRIPTASE INHIBITORS THERAPY

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Highly Active Antiretroviral Therapy (HAART) has substantially changed the survival rate and quality of life in patients infected with HIV. Combinations of HAART invariably contain nucleosidic reverse transcriptase inhibitor drugs which can induce mitochondrial dysfunction due to inhibition of the mtDNA polymerase, the only enzyme responsible for the replication of DNA. This inhibition seems to be the main cause of the mtDNA depletion and the subsequent change of the mitochondrial protein synthesis, which results in various clinical situations. Of these, the most serious is lactic acidosis (LA). In cases of LA, severe hepatic failure can also occur, leading to death in up to 50% of cases. Current normal treatment for such cases consists of the application of symptomatic measures and withdrawing the antiretroviral medication; a specific treatment of hyperlactataemia which is related to the use of antiretrovirals still being unknown. Objective: To determine the effectiveness of direct lactic acidosis therapy for the correction of mitochondrial toxicity. Methods: Consecutive HIV-patients receiving NRTIs, addmited in emergecies department with symptomatic lactic acidosis and symptomatic hyperlactataemia, in the absence of hypoxaemia, cardiac failure, and a recent history of alcohol or drug abuse, diabetes or sepsis. Venous hyperlactataemia was considered at > 2.2 mmol/l. Treatment consisted of hydration, a daily vitamin regime of L-carnitine (1gr/12h), thiamine (250mg/8h), vitamin B6 (250mg/8h), vitamin B12 (500mg/8h), vitamin C (1g/12h) and any glucose intake was discontinued. NRTIs treatment was stopped immediately. Results: A total of nine patients on current therapy have been identified to have symptomatic hyperlactataemia (4 patients) or lactic acidosis (5 patients) from 1/2001 to 7/2002. All were patients with AIDS (CDC-93 classification). The mean ± SD venous lactate was 5.6 ± 2.4 mmol/l (range: 2.34 - 9.35). All patients were receiving NRTIs with a mean treatment duration of 5 years (range 8 month-13 years): AZT(4), 3TC(2), d4T(5), ddI(7), abacavir(1). The most common symptoms were tachypnoea, slight fever, abdominal pain, nausea, vomiting and diarrhoea. Eight patients had a favourable prognosis after administration of L-carnitine and vitamin complexes, with a discontinuation of NRTIs therapy and glucose intake; and only one with renal large-cell lymphoma died. Clinical features lasted 7 days. The mean resolution time of the venous hyperlactataemia value after treatment was much more longer (30 ± 8 days). After a mean range time of 10 ± 5 months of follow up, none had a recurrence of the syndrome. Conclusion: The application of this therapy could play a role in the treatment of NRTI - related lactic acidosis.

SINDROME CORONARIO AGUDO EN PACIENTES CON VIH: UNA NUEVA COMPLICACIÓN EN LA ERA HAART

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Introducción: Desde la introducción del tratamiento antirretroviral altamente eficaz (HAART) en pacientes afectos de la infección por VIH, éstos han mejorado su morbimortalidad y por tanto la calidad y cantidad de vida; sin embargo se han empezado a describir otro tipo de enfermedades que se relacionan con efectos secundarios del tratamiento antiretroviral (ART). Entre las mismas, destaca, las alteraciones metabólicas: lipodistrofia, resistencia a la insulina y dislipemia; estas dos últimas situaciones son factores de riesgo cardiovascular y junto con el agravante que estos pacientes acostumbran a ser fumadores, todo ello junto a que no se puede retirar el ART, (y por lo tanto se perpetuaran los efectos secundarios) comporta que el riesgo de sufrir aterosclerosis y sus complicaciones es alto. Pacientes Y Métodos: Período de estudio: 2002. Se incluyeron los pacientes que en este período presentaron un síndrome coronario agudo (SCA). Se elaboró una hoja de recogida de datos que incluía: datos demográficos (sexo, edad..), antecedentes familiares de primer grado de cardiopatía isquémica y de factores de riesgo cardiovascular (FRCV), antecedentes personales de FRCV, datos de la infección por VIH, tipo de síndrome coronario aguda (SCA), tratamiento y exploraciones durante el ingreso y tratamiento al alta. Resultados: De nuestros pacientes controlados de forma regular (406) se produjeron 6 episodios de SCA en 5 pacientes. Todos eran varones. Edad media: 41,6 años (33-62). Conducta de riesgo 3 drogadicción via parenteral y 2 contacto heterosexual.

Tabla 1. Antecedentes familiares y personales

Ant. Familiares	1/5 (20%) SCA
HTA	0/5
DM	0/5
Dislipemia	2/5 (40%)
Tabaquismo	3/5 (60%)
Lipodistrofia	4 /5(80%)
Motivo de consulta	
IAM	4 /6
Angor	1/6
Muerte súbita	1/6

Tabla 2: Analítica y tratamiento durante el ingresos

Hipercolesterolémia	2/4 (50%)
Hipertrigliceridémia.	2/4 (50%)
Disminución HDL-C	2/4 (50%)
Elevación LDL-C	1/ 4(25%)
Fibrinolisis	2 /4(50%)
Descoagulación terapéutica	2/4(50%)
Nitratos	2 /4(50%)
Betabloqueantes	3/ 4(75%)
AAS	4/4 (100%)
Ingreso en UCI	4 /4(100%)

Uno de ellos reingreso en las siguientes semanas por angor inestable, se había practicado ergometria submáxima que no fue concluyente, en este segundo ingreso se practicó coronariografia que mostró lesión DA colocándose STENT sobre dicha lesión.

Tabla 3 Tratamiento al alta

AAS	4 (100%)	Estatinas	2 (50%)
Betabloqueantes	4 (100%)	Dicumarinicos	1 (25%)

Discusión: - La población con VIH tiene una serie de condicionantes (tabaquismo) que junto con los efectos secudarios del ART favorece la aparición de patologia isquémica cardíaca en edades tempranas. - La imposibilidad actual de retirar el tratamiento ARV, nos obliga a ser muy exhaustivos en el tratamiento de los otros factores de riesgo cardiovascular y de las alteraciones metabólicas que se producen por dicho el mismo. Por todo ello se debe tener presente el problema en este colectivo y se crea la necesidad de estudios - Se necesitan estudios multicéntricos para ver el alcance del problema y de las consecuencias socioeconómicas que acarreará.

SHORT METHOD. QUICK AND EFFICIENT TRIAGE

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The short method was created as pre-hospital initial triage before mass casualty incidents (MCI). It is thought to be applied by non sanitary personnel (fire-fighters, police, etc.) and it aims to simplify the initial rescue task. The letters of the acronym SHORT stand for the steps to follow. S (Steps out – to leave walking), H (Holds normal conversation – to talk without difficulty), O (Obeys simple orders – to obey simple orders), R (Respiration – to breath), T (Treats haemorrhages – to plug haemorrhages). Colours are used to classify the gravity of the victims. Green is applied to those victims with light injuries who can walk (S; he/she leaves walking). Among those victims who cannot walk, the classification is as follows: Yellow for moderate seriousness (H and O; he talks without difficulty and obeys simple orders); red, very serious requiring immediate stabilisation (R; he breaths or shows blood circulation signs, and black, deceased victims or with fatal injuries (R; he cannot breath and doesn't show blood circulation signs). Objectives: To assess the effectiveness of the SHORT method to discriminate the most serious victims. To calculate the triage time used up per victim. Methodology: Implementing with MCI drills or mocks and teaching practices carried out between December 2000 and April 2003 with a total number of 203 clinical cases. The victims roles were played by trained extras made up for the desired effect. The rescuers were the fire-fighters and the non-sanitary personnel of Basque Country (CAV). Design: descriptive and transversal study. Indications: feeling, specificity, positive prediction value and negative prediction value. Parameters: Number of victims classified as red, yellow, green and black. These results have been contrasted, by using contingency tables, with the estimated classification. Time used up in the triage. Results: Average triage time per victim: 18 seconds. Discrimination of "reds" in the classification: 92% feeling, 97% specificity, 90% positive prediction value, 96,5% negative prediction value, 96% global value. Global percentage of right answers in the classification: 93,5%. Conclusions: The SHORT method is easy, effective and easy to remember. It is well suited to the formation of those who lack of medical knowledge and it envisages a rescue with more protocol in a realistical way.

M.A.R. TO SIMPLIFY THOSE MASS CASUALTY INCIDENTS

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The first physician to arrive at an mass casualty incident (MCI), after checking the safety of the scene and informing the Coordination centre, must organise the assistance axis on which the rest of the medical care will depend. He/she will approach to the Command Post (Mando del incidente) to get information about the situation and/or to assume Medical Incident Officer (Mando sanitario). Afterwards, he/she will organise the Advanced Medical Post, setting up the areas and appointing the responsible ones. To simplify this performance scheme, we propose a mnemonic rule with the word "M.A.R." and the "T" rule, where the letter "M" for "MAR" is the first letter of the word "mando"- command (mando del incidente, mando sanitario: incident or sanitary command), "A" is for "areas" and "R" is for "responsible". Likewise, the "T" rule reminds us of the initials of the areas as well as the responsible ones of the advanced medical post (triage, treatment, transport, telephone). Objectives: To facilitate the memorisation of the of the key medical care functions to be carried out to the first physician who arrives at an MCI thanks to the mnemonic rule "M.A.R." and the "T" rule. Methodology: Bibliographic revision about the performance plans and the actions to be carried out by the first physician who arrives at the MCI place. This revision has taken place in the main databases (MEDLINE, etc) and in related national and international articles published from 1980 up to now. Consultation to the sanitary staff asking about the usefulness of this rule. 20 people, both doctors and nurses, have been questioned about that. Conclusions: Out of the carried out consultation, the usefulness and simplicity of the mnemonic rule has been unanimously asserted, and it has been considered convenient to simplify as much as possible this type of protocols since MCI are regarded, on the whole, difficult and dry. Nevertheless, this plan simplicity should not minimise the rest of the tasks that have to be carried out in these situations. In the bibliographic revision, we have found a shortage of literature which can accurately explain the functions of this first physician. However, when they are mentioned, we have observed rather uniformity about the performance criteria in the different references.

PATOLOGÍA DERMATOLÓGICA Y URGENCIAS

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Objetivos: El objetivo del presente estudio es una aproximación a la patologìa dermatològica que se observa en Urgencias. Metodología: El diagnòstico e identificaciòn de las enfermedades de la piel y las lesiones bàsicas que se pueden presentar no es tarea fàcil, por ello diseñamos un estudio prospectivo descriptivo con el fin de identificar la patología dermatológica que se visita en urgencias. Se creò una hoja de recogida de datos en la que debìan constar los siguientes datos: Lesiòn básica (màcula, pàpula, roncha, nódulo, quiste, vesícula, pústula, úlcera, atrofia, escama, hiperqueratosis, erosión), localizaciòn, consistencia (blanda, dura, fluctuante), variaciòn

de temperatura, movilidad, profundidad (dèrmica, subcutánea), forma de la lesión (redondeada, geográfica ,oval), descripciòn de màrgenes (bien o mal definidos), disposiciòn de las lesiones (agrupada, diseminada), extensión(aislada, localizada, regional, generalizada), patrón (simétrico àreas expuestas, sitios de presión, al azar), afectaciòn de pelo y uñas, afectaciòn de mucosas, prurito, tiempo de evolución , patologìa asociada con la lesiòn, orientaciòn diagnòstica y tratamiento. Resultados: El nùmero total de urgencias cuyo principal motivo de consulta fue una lesiòn dermatològica que se atendieron en nuestro servicio en los meses de Diciembre del 2002 y Enero del 2003 fuè de 91 sobre un total de 5215 lo que representa un 1,74 % del total. El nivel de cumplimentaciòn de la hoja de recogida de datos fuè el siguiente: Tipo de lesión 98,9 %. Localizaciòn 93,4 %. Consistencia 82,4 %. Variación de temperatura 86,9 %. Movilidad 76.9 %. Profundidad 83,5 %. Forma de la lesión 96,7 %. Màrgenes 92,3 %. Disposición 75,8 %. Extensión 85,7%. Patròn 49,5 %. Afectaciòn de pelo y uñas 94,5 %. Afectación de mucosas 98,9 %. Prurito 98,9 %. Patología asociada a la lesión 96.7 %. Orientación diagnóstica 96.7%. Tratamiento 89 %. Conclusiones: El tipo de lesiòn màs diagnosticado fuè la màcula 47,3 %, el habòn 23,1 % y vesícula 12,1% con un tiempo de evoluciòn entre uno y cuatro dìas en un 75,9 % con un 40 % varones y un 60 % mujeres, con prurito en un 75,8 % y de localizaciòn generalizada en un 28,6 % ,cabeza en un 17,6 % . Se orientò como Reacciòn alérgica en un 34,1 % Urticaria aguda 13,2 % y Herpes Zoster 12,1 % . El tratamiento más pautado fuè antihistamìnicos en un 41,8 % y corticoides generales 14,3 %. Se observa un claro predominio de enfermedades de carácter alérgico, con un sìntoma guía fundamental que es el prurito. A destacar que el tercer diagnóstico es el Herpes Zoster que prácticamente se corresponde con todas las lesiones vesiculosas observadas.

DEFIBRILLATION IN THE NAUTICAL WAY: COMPARATIVE STUDY OF MODELS DEA

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Objectives: To value the response of the DEA's different models used habitually in our way at different crafts used in our Methodology every supposition consisted of the application of three exhausts with each of the DEA used of the study (Hewlett Packard's Fore Runner, Fred of Schiller, Lifepack 500 of Control Picio) of different types of ships and of different conditions of navigation (to different speeds of navigation). The exhausts were realized on a manikin of simulation Ambu desfi connected to a malingerer of pace AMBU ECG BOX. The connections of the DEA to the manikin were specific for every desfibrilador and with terminus(terminal) in point of electrode to be able to realize real exhausts without risk of spark or voltaic arch. The manikin was placed on a spinal plastic table I hold with straps as safety measurement.

There were registered all the parameters analyzed in an staff of field work: Date, hour, supposition, coordinates, province, island, pace PCR. Observations in welfare cabin, observation into cabin of pilotage, energy 1era exhaust, energy 2 comes out, energy 3. Result: There was realized a whole of 15 suppositions three exhausts were realized with each of the DEA (9 exhausts in every supposition) that give a whole of 135 exhausts. They retired (went home) the times of load of the different DEA: Fore Runner, Fred, Life Pack 500 obtenied for this order the following times 1ra loads 6,447 ", 3,571, 7,786, 2da it(he,she) loads 6,701 ", 3,489 ", 9,138 ", 3ra it loads 7, 809 ", 4,467 " 16,795 ". Types of passenger's crafts (Jet Foil Transmediterranea, Ferry of Weapon, Catamarán of Maritime lines Rosemary, Submarine Mark III of Atlantis submarinades) of rescue and salvage (launch of salvage Zodiac Duarily cormmoran of red cross, ship of salvage of of the group of intervention in emergencies (, ship of salvage salvamar Nunky of maritime salvage. Only in an occasion a DEA not realized an exhaust for detecting movement (life Pack 500). All the DEA came out on thick FV, I advise none on a thin FV, they all came out on TV without pulse. Conclusions: 1-The utilization of the DEA in a nautical way appears as a sure technology (skill) and without interference in the instruments of navigation 2. It is necessary to elaborate a specific procedure of desfibrilation in each of the crafts to realize the technology (skill) safely. We recommended to displease to affected dry zone, to dry the area of work (thorax), to use an insulating way as spinal table, mattress insulating and some system of fixation (you bother with clasps not metallurgies).

MONITORING ECG 12 DERIVATIONS WITH HARNESS: COMPARATIVE STUDY ON CONVENTIONAL MONITORING WITH ELECTRODES

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Framed in the project of telemedicine and defibrillation in emergency of the SUC (Canary Emergencies Services) we put in march a comparative study of transmission route telemedicine of ECG of 12 derivations between (among) conventional monitoring with electrodes and the conventional monitoring with electrodes and the monitoring with harness of rapid monitoring. We want to verify the reliability of the transmission with harness, to measure the profit of time in the monitoring and to evaluate the problems that we found in the practice on having applied the technology. Methodology: Every supposition consisted of the monitoring and transmission of an ECG of 12 derivations of a healthy volunteer of two situations; with 10 disposable electrodes and with (in spite of) harness of silicona (ECG electrodes Belt W/> rm oval electrodes, model; TSK ARhOd0018, distributed by TAPUZ Medical Technology Ltd) gelando the points. The transmission I realize from a DEA shape FRED of the house Schiller with capacity of transmission across a MODEM GSM to the room of sanitary coordination of the SUC in the CECOES 1-1-2 of Las Palmas de Gran Canaria, where it is got for two lines; RDSI and GSM. Result: In whole there were done 30 ECG transmissions of 12 derivations (15 with electrodes and 15 with harness). All the transmissions were realized with normality I save in two occasions: a transmission from ASVB on having happened (passed) under a tunnel and a transmission from a craft in which an operator extinguished the DEA for mistake. Place of the transmission; the first 12 did from the unit of formation of the SUC on the 07-03-2003rd. The remaining 18 did to themselves as fieldwork from differently Fuerteventura and Lanzarote's points during 31-03-03 and 01-04-03, in sanitary centers, ASVB and crafts. 20 from sanitary centers, 6 from ASVB, 4 from passengers' crafts, position during the transmission; stretcher 18, sat, stopped 4, sat in movement 8. The transmitted EKG was got in the head office (plant) of telemedicine for the application SEMACOM and there were transferred to the application SEMA 200 that

it (he,she) was exploiting the results. In every ECG 10 parameters were compared: FC, RR, PQ, QRS, QT, QTc, Axis (axle). Conclusions: 1-In no case the down thorax hair was an obstacle for the transmission with harness and it was not necessary to shave. In some cases the transmission with electrodes was impossible without shaving, 2-The times of monitoring were slow significantly in the monitoring with harness saving approximately two minutes in spite of the fact that the personnel was trained in the monitoring with electrodes and it was the first time that they were using the harness. Monitoring with electrodes; 2 30 ", monitoring with harness 30 ". 3 ideal transmission in spite of not supporting the position of supine decubitus; sat in movement in ambulance in march and in crafts, they appreciate significant differences neither in the tracing nor in the parameters ECG between (among) the ECG monitored with electrodes and the monitored ones with harness. 5-It is an effective and efficient system but we do not recognize his (its) permanence of the device throughout the time.

SYNCOPE AS AN INITIAL PRESENTATION OF AN ADDISONIAN CRISIS

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Introduction: Addisonian crisis, also commonly referred to as adrenal crisis is fairly rare whitout sex or racial predilection and occurs when the cortisol produced by the adrenal glands is insufficient to meet the body's acute needs.The symptoms are nonspecific and can mimic other processes.Addisonian crisis commonly occurs iatrogenically upon the abrupt withdrawal of exogenously administered steroids, but it can also occur in patients with Addison's disease who are exposed to stress (surgery, trauma, infection,or illness) and have not been given stress doses of corticosteroids. Method: We describe a Addisonian Crisis in a woman of sixty years old who was found unconscious inside of her car, mimicking initially a severe hypoglycemia attack. A review of the bibliography on the Addisonian crisis in medical data base was done. The case presented herein illustrates occult Addisonian crisis. Results: Subsequently three reviews were made in Ovid with the terms key "Addisonian crisis", "adrenal insufficiency" and "emergency medicine", "adrenal insufficiency" in Spanish language and found a total of 89, 75 and 162 publications respectively. None of these publications refers to extrahospital or emergency medicine. Therefore we are able to say that it is the first case described in the out-of-hospital diagnosis and treatment of Addisonian crisis. Conclusions: Acute adrenal crisis is a life-threatening state caused by insufficient levels of cortisol that can lead to death. Death may occur due to overwhelming shock if early treatment is not provided. In adrenal crisis, an intravenous injection of hydrocortisone must be given immediately. Supportive treatment of low blood pressure with intravenous fluids is usually necessary. Hospitalization is required for adequate treatment and monitoring.

CHARACTERISTICS OF THE PATIENTS THAT CONSULT FOR PAIN IN OUR SERVICES OF URGENCIES

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The pain, as acute as chronic, is a very usual symptom, so much habitual that has been converted into the more frequent symptom which accompain the patients that come to the doctor. In these conditions, the pain is the more prevalent symptom among the patients, so that pain is formed as one of the more impacting entities in the management of the Medicine of Urgencies. In this way, is important to know what percentage of cases are attended in a service of urgencies which present pain and what additional overloads suppose for the system. To realize a correct approximation of the treatment for the pain in our Services of Urgencies, first, we should know how are our patients that consult with pain or for pain. The Group for the Study of Medicine of Urgencies in Regional Hospitals (GEMUHC) has developped a study in which is proposed: Objetives: To estimate the effect of pain in patients attended in services of urgency of regional hospitals. To value the epidemiology, characteristics of the pain for which they consult, time that they present pain, origin of the pain, patologies accompanists, concomitant medication that they use before arriving to urgencies for controlling the pain, origin of the prescription, satisfaction with the treatment and location of the domineering pain. Material And Method: Descriptive transversal study by means of clinical interview patients attended in services of urgencies of 16 regional hospitals members of GEMUHC. There was gathered the information of all patients who came to urgencies in Monday, Wednesday and Saturday (October 28, November 6 and 16) from 8 a.m. of the day of observation until 8 a.m. of the following day. Results: In these three days there came to urgencies a total of 3575 patients. The middle age of the patients was 39,01-year-old. 50,2 % were men and 49,8 % women. A total of 1655 (52,3 %) patients, the motive of consultation is the pain that produces their pathology to themselves, and this rises until 2091 (59,6 %) when they are asked if the motive of consultation is accompanied, besides, of pain. In 90 % of the cases the pain was acute, of constant predominance in 75,8 % and was increasing with the movements in 52,5 % of the cases. 52,5 % of the patients were presenting the sympton an average of 5,3 hours from the beginning of the pain. In 11,6 % of the cases the pain was present weeks, months or years. The origin of the pain was traumatic in 37,9 %. In 501 (32 %) cases the pain prevents the rest of the patients, 123 (6,2 %) of the patients had gastrointestinal precedents, 24 (1,2 %) assets were presenting ulcus and 641 (31,9 %) of the patients were presenting other diseases for which they were receiving treatment. 475 (23,8 %) of the patients receive treatment for the pain when they come to Urgencies, being the paracetamol the most ussual medicament followed by the ibuprofeno and metamizol. 89 % use the oral route with an average of 2,18 times a day . And in 87,7 % of the cases only were using one analgesic medicament. In some case the patient was taking three AINEs together. 35,9 % of the cases the capture of the medicament owed to autoprescription and 2,8 % of the cases they were recommended in the pharmacy. In 76 % of the cases the satisfaction of the treatment was regular, bad or very bad. The location of the dominating pain was felt predominantly in the members low followed by the abdomen and the head. Con-

clusions: More than 50 % of the patients who come to urgencies is consequence of the pain. It is fundamentally a young people question, in whom the pain results invalidant with the consistent socio-economic problems that this generates. Fundamentally, they consult for an acute pain, although it turns out to an important number of patients that come to urgencies for pain with several months and years of evolution with the consequent overcharge to our work. The traumatism constitutes an important source of work in our way and having in one tells that we do not have specific Service of Urgencies of Trauma the pressure assistance is clearly increased with regard to Hospitals of major welfare level. We see that in an important number of patients the pain represents an important alteration in their life so that it prevents them sleeping. In 1/3 of the cases it is a question of patients several illness determine our prescription at the moment of initiating the treatment of the pain in Urgencies. A considerable number of patients were already taking an analgesic treatment when they consult. This treatment is clearly insufficient if we have into account the dose which is probably insufficient. I respect the ideal one, and the degree of satisfaction that the patients show with this treatment. We verified that the patients continue their uncontrolled self-treatment where they can take up to 3 AINEs of joint form for the same pathology. This indiscriminate capture of medicaments considerably increases the danger of side effects. The lowest members are more affected by the pain. If we have into account all that, we think, that the clinical pharmacological approximation to the patient with pain in the Services of Urgencies can turn out to be much more simple in order to create strategies directed to a correct treatment of the pain in our Services of Urgencies.

COMPARATIVE EFFECTIVENESS OF INTRAVENOUS METOCLOPRAMIDE VERSUS KETOROLAC IN THE TREATMENT OF ACUTE MIGRAINE ATTACKS

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Metoclopramide is widely used in the acute treatment of migraine- associated nausea and vomiting. However, when administered intravenously, it has been also reported to be effective in relieving attack's pain. Objectives: To evaluate the effectiveness of 10 mg intravenous metoclopramide (MTC) as single agent versus 30 mg intravenous ketorolac (KTC) in the symptomatic treatment of migraine attacks. Methods: 31 patients requiring acute migraine treatment received either metoclopramide (N=15) or ketorolac (N=16). Most of them (N=19) had previously tried a triptan, another NSAID or mixed drugs without reaching significant relief. Headache intensity was assessed in a 5-points scale at 0, 15, 30, 45, 60 and 90 minutes, and subjects' improvement was scored in a 7-points scale after drug injection. Persistence of associated symptoms was recorded. Two-way analysis of variance was applied to compare groups' evolution. Results: Ninety minutes after drug administration 50% KTC and 38% MTC reported mild pain, and 50% KTC and 62% MTC reported no pain; 33% KTC and 16% MTC reported moderate improvement, 17% KTC and 31% MTC very much improvement, and 50% KTC and 46% MTC total recovery; no significant differences were found between groups. As expected, MTC was superior on nausea and/or vomiting; neither drug ameliorated photophobia nor phonophobia. No side effects were reported by any subject. Conclusions: Intravenous metoclopramide seems highly effective in emergency migraine management, and can be a good choice in patients refractory or intolerant to triptans and/or NSAIDs.

COMPARISON OF NASAL SUMATRIPTAN AND ORAL RIZATRIPTAN VERSUS INTRAVENOUS KETOROLAC IN THE EMERGENCY MANAGEMENT OF MIGRAINE ATTACKS

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Triptans are considered nowadays as drugs of choice in the acute management of severe migraine, being recommended the use of NSAID in headache of low to moderate intensity. This recommendation, however, applies essentially to the oral NSAID preparations. Purpose: To compare the effectiveness of 20 mg nasal sumatriptan (SUM) and 10 mg oral rizatriptan (RIZ) with 30 mg intravenous ketorolac (KTC) in the emergency treatment of migraine attacks. Patients & methods: The sample included 46 patients: 15 of them received SUM, 15 RIZ and 16 KTC. Most of them (N=19) had previously tried a triptan, another NSAID or mixed drugs without reaching significant relief. Headache intensity was assessed in a 5-points scale at 0, 15, 30, 45, 60 and 90 minutes. Persistence of associated symptoms and drug-related side effects were recorded. Two-way analysis of variance was applied to compare groups' evolution. Results: No differences were found among groups in the evolution of migraine; 90 minutes after drug administration 9 (60%) of SUM-treated patients, 11 (73.3%) of RIZ-treated patients and 10 (62%) of KTC-treated patients reported to be pain-free. Persistence of associated symptoms (nausea/vomiting and photo/phonophobia) was similar in every group. Adverse reactions were reported only among triptans-treated patients (7 cases in the SUM-treated group and 3 cases in the RIZ-treated group), and they were mild and self-limiting in all of the cases. Conclusions: Triptans are effective and well-tolerated drugs and their use can decrease patients' assistance to the emergency department; once there, the use of ketorolac - an effective and cheaper drug - by intravenous route should be considered.

FRECUENTACION DE PACIENTES DE ORIGEN MAGREBI Y SUBSAHARIANO EN EL SERVICIO DE URGENCIAS DEL HOSPITAL DE MATARÓ

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Introduccion: El Hospital de Mataró está situado en la comarca del Maresme, tiene una área de influencia de 230.000 habitantes, dispone en época de máxima ocupación de 330 camas de hospitalización y en el año 2002 se atendieron 109.000 urgencias. En nuestra comarca es evidente el crecimiento de la población procedente de la inmigración, representando los inmigrantes del Magreb y zona subsahariana el 5,5 % del censo oficial de su capital, la ciudad de Mataró (105.000 habitantes) Objetivo: Valorar la frecuentación del Servicio de Urgencias por el grupo de población procedente del Magreb y Africa subsahariana. Metodologia: Estudio

descriptivo de una muestra de todos los pacientes visitados en urgencias durante una semana sin festivos intersemanales, de cada uno de los 12 meses del año 2002. Analizamos y comparamos parámetros de edad, sexo, día de la semana de consulta en urgencias, destino al alta y grupos de patología prevalentes entre pacientes de origen africano y el resto de población. Resultados: La muestra recoge un total de 25.362 visitas, de las cuales 1.770 corresponden a pacientes de procedencia africana representando un 7% del total con un índice de ingreso del 7,97 % frente al 9,96 % del resto de la población. Del total de ingresos el 5,6% son de origen africano y 94,38% el resto de población. Del total de ingresos por parto el 21% corresponden a población de origen africano (45,71% de sus ingresos) frente a 79% en el resto de la población. Suprimiendo los ingresos por parto, el índice de ingreso en el grupo de pacientes de origen africano disminuye hasta el 4,33% mientras que en el resto de población queda en el 8.98%. La edad media del grupo de pacientes de origen africano es de 24,82 y para el resto es de 37,27. Por sexo en el grupo de origen africano el 55% hombres y el 45% mujeres mientras que en el resto de población el 48% son hombres y el 52% mujeres. En el grupo de pacientes africanos el 32% de sus consultas se registran en sábado o domingo frente al 29% en el resto de la población. Las patologías más frecuentes del grupo de africanos descartadas las traumatológicas, son la patología infecciosa y gastrointestinal leves 27,71%, mientras que para este mismo grupo de patologías en el resto de población representa un 17,66%. Conclusiones: ? Los pacientes de origen africano (magrebis y subsaharianos) consultan proporcionalmente en urgencias más los fines de semana que el resto de la población, mantienen la misma frecuentación que el resto de población lunes, martes y miércoles disminuyendo los jueves y viernes. ? Los pacientes africanos consultan proporcionalmente más por patologías traumatológicas, infecciosas y gastrointestinales leves que el resto de la población. ? La edad media de los pacientes africanos es significativamente inferior a la del resto de la población. ? Los ingresos por partos es el primer motivo de ingreso hospitalario por parte de la población de origen africano. ? En resumen la población de origen africano en nuestra zona es joven, utiliza como la población general el SU como Centro de Atención Primaria, más en los fines de semana, con una población menor de mujeres y el primer motivo de ingreso son los partos.

IS IT POSSIBLE TO REDUCE THE HOSPITALARY DELAY IN THE ADMINISTRATION OF FIBRINOLYTIC TREATMENT IN THE ACUTE MYOCARDIAL INFARCTION (AMI)? ANALYSIS OF REGISTRY RESIM DATA (REGISTRY OF ACUTE MYOCARDIAL INFARCTION IN THE EMERGENCY SERVICES OF SPAIN)

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Aims: The early fibrinolytic treatment in the AMI with ST-segment elevation improves significantly the prognostic. We have proposed the Fibrinolysis Index (FI) during the first and second hours of the symptoms evolution, as a quality indicator of the assistance in the AMI, setting as a goal standard the 15% and the 50% (ARIAM group: Analysis of the delay in the acute of myocardial infarction). The object of this research is the knowledge of the FI in the Hospital Emergency Services (HES) and to analyzing the strategies to improve them. Methodology: We took the 1974 patients data included, from January 2001 to May 2003, in the national registration RESIM with the participation of 27 spanish hospitals. The following variables were analyzed: Assistance time, ARIAM Priority, reasons no to realize fibrinolysis in the emergency service (ES), and the FI during the first and second hour. Results: The global prehospitalary delay was of 137 minutes (median; percentile 25: 72 minutes, percentile 75: 270 minutes). The ARIAM Priority distribution was: Priority I 41.24%, Priority II 40.98%, and Priority III 17.78%. Time of arrival to hospital and ECG applied was of 7 minutes (median; percentile 25: 4 minutes, percentile 75: 15 minutes). 791 patients (40,07%) received fibrinolytic treatment in the ES with the following results; Priority I: 457, Priority II: 321, Priority III: 13. The door to needle time was of 29 minutes (median; percentile 25: 17 minutes, percentile 75: 50 minutes). The main reasons no to realize fibrinolysis were the transfer to the Coronary Unit (592 patients), the delay (239 patients), and due to not to have available the fibrinolytic drug in the ES (165 patients). The FI in the ES amounted to 8,36% in the first hour and the 34,73% in the second hour. Conclusions: 1.- The fibrinolysis Index are under standards. 2.- The door to needle is proper. Specific studies are necessary to reduce the prehospitalary delay and/or improve the prehospitalary fibrinolysis. 3.- We consider necessary to increase the number of patients in Priority I treated in the ES before were transferred to the Coronary Unit and hability the disposal of the fibrinolytic drug in the same ES.

CARACTERÍSTICAS DE LOS ACCIDENTES CEREBROVASCULARES AGUDOS EN NUESTRO MEDIO. ¿DEBEMOS HACER ALGO MÁS?

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Obejtivo: Conocer las características de los pacientes afectos de accidente cerebrovascular agudo (ACVA) que ingresan en un hospital de nivel II. Metodo: Estudio retrospectivo de los pacientes ingresados en nuestro hospital durante el año 2001 con el diagnóstico de ACVA. Se analiza: sexo, edad, mes y hora de presentación del episodio, patología concomitante, tipo de primera asistencia, forma de traslado al hospital, sintoma inicial, tiempo de demora en la llegada al hospital y en la realización del primer TAC, coincidencia diagnóstica entre ingreso y alta, estancia, secuelas y mortalidad. Resultados: de los 163 ingresos, fallecieron 28 (17%), de los cuales 90 (55,1%) eran varones. La edad media fue 76,24 años,(rango 46-94).La presentación fue menor en el trimestre Junio-Agosto, con 35 casos (21,4%). Los ACVAs aterotromboticos aparecen de madrugada (70%). Al ingreso el 54% de los pacientes refieren disartria. El 60 % de los pacientes tenian antecedentes de HTA, el 30% DE cardiopatia isquemica, y el 31% de ACVA previo. El 70% acude al hospital por sus propios medios y sin valoracion facultativa previa.El 45% tarda menos de 3 horas en acudir al hospital, y en el 65% de los casos se realiza el TAC en las primeras 3 horas.Desde su

llegada la estancia media fue 14,58 +/- 11,36 dias. En el 90% de los casos coinciden los diagnosticos al ingreso y al alta. El 42% queda con secuela leve y el 28% con secuela importante. Conclusiones: Dada la proximidad de la población al hospital hay un grupo no desdeñable de pacientes que podrian beneficiarse de actuaciones " activas " tipo fibrinolisis en el manejo del ictus isquemico agudo. Una actitud terapeutica intervencionista precisa de una adecuado manejo en el area de Urgencias.

¿CONOCE EL PERSONAL DEL HOSPITAL COMO FUNCIONA EL SISITEMA DE EMERGENCIAS MEDICAS?

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Introducción: El 19 de julio del 2002 se puso en funcionamiento en el Hospital de Mataró (BCN) la nueva base del SEM, según el modelo implantado por SEM.SA en base a la utilización de vehículos de asistencia medicalizada (VAM), con una cobertura geográfica determinada que abarca, aproximadamente, una población de 230.000 habitantes; la misma arrea de influencia que el Hospital de Mataró. Objetivo: Valorar el nivel de conocimiento que tiene el personal del Hospital de Mataró sobre "quienes somos" y "como trabajamos". Material y métodos: A los seis meses de la puesta en marcha del VAM, se elaboró una encuesta cerrada de 10 preguntas; realizando un total de 190, que representa el 22,4% del total de la plantilla de trabajadores contratados por el hospital. Fueron repartidas proporcionalmente según categorías profesionales: título superior (TS), título medio (TM), formación profesional (FP) y no cualificados (NC). Mediante un análisis comparativo de los resultados obtenidos en los diferentes grupos estudiados, se agruparon las tres primeras preguntas como instrumento para obtener el primer objetivo y las restantes para el segundo Resultados: La media de edad de la muestra es de 38 años, siendo 137 mujeres y 53 hombres, divididos en 56 TS, 73 TM, 54 FP y 7 NC. Después de analizar los resultados hemos verificado que las cuatro categorías conocen en un 93'15% "quienes somos" (TM 94'5%, NC 85'7%). El 87'3% sabe "como trabajamos" (NC 100%, FP 70'3%) y un 58'4% conoce las características físicas propias del VAM (NC 85'7%, TS 30'3%). Asimismo hemos podido constatar que las diferentes categorías profesionales ante una situación de urgencia y/o emergencia sanitaria reconocen el número de teléfono al que tienen que llamar (TM 71'2%, TS 51'8%) así como donde están llamando (TS 96'4% , NC 57'1%) Conclusiones: El personal que trabaja contratado por el hospital de Mataró, independientemente de la categoría profesional a la que pertenece, conoce "quienes somos" y "como trabajamos".

IMPACTO EN EL SERVICIO DE URGENCIAS DEL HOSPITAL DE MATARO DE LA APERTURA DE UNA BASE DE EMERGENCIAS MEDICAS (SEM). RESULTADOS TRAS 6 MESES DE ACTIVIDAD

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Desde la puesta en marcha, en Julio del 2002, de un sistema de emergencias prehospitalarias, dependiente del SU del Hospital de Matarò se ha constatado un cambio en la forma de atender algunas patologias. El servicio prestado se lleva a cabo en un vehìculo de asistencia medicalizada (VAM), el cual va dotado con un medico, una enfermera y un técnico en transporte sanitario, y cuenta con el apoyo de una ambulancia convencional para el traslado del paciente si este lo requiere. OBJETIVO Demostrar que la puesta en marcha de un VAM en el àrea de influencia del Hospital de Matarò, ha modificado la dinàmica asistencial, lo cual ha supuesto un cambio en los niveles de complejidad y carga asistencial del SU. Material Y Metodos: Se cuantificaron los pacientes asistidos por el VAM en un periodo de 6 meses, Julio a Diciembre 2002, cuyos diagnòsticos fueran Parada Cardiorrespiratoria (PCR), Traumatismo Craneoencefàlico Grave (TCE) y Politraumatismo (PTX), realizando asimismo un anàlisis retrospectivo de las asistencias con dicho diagnòstico en el SU en el mismo perìodo de los anos 2001 y 2002. Resultados: De las 866 activaciones recibidas por el VAM, se asistieron 740 casos (63.2%) siendo un 5.9% PCR (44), un 5.7% TCE (42) y un 2.6% PTX (19). Asimismo la asistencia en el SU de dichos diagnòsticos en el 2001 y 2002 fueron respectivamente PCR 11/5, TCE 278/224 y PTX 25/33. Conclusiones: La puesta en marcha del VAM en el àrea de influencia del Hospital de Matarò, conlleva como consecuencia inmediata una modificaciòn de las cargas de trabajo, asì como un cambio en la dinàmica asistencial del SU, que tras un anàlisis exhaustivo se traduce en una mejora de la calidad asistencial.

ESTRATEGIA PREVENTIVA EN EL PERSONAL DE EMERGENCIAS DEL TRASTORNO DE ESTRESS POSTRAUMÁTICO

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SAMUR-P.C. es un servicio de emergencias prehospitalario de Madrid ,en el desarrollo de su actividad tiene que enfrentarse a incidentes críticos. Su personal está expuesto en mayor medida que otros profesionales a esos "incidentes críticos"(fallecimiento de niños; perder a una víctima después de un socorro prolongado etc.).Situaciones con alto potencial de impacto psicológico provocando en la mayoría de las ocasiones síntomas de estrés agudo. Dicha reacción habrá de tener un seguimiento que evite su derivación en crónica, lo que podría originar la instalación del Trastorno de Estrés Postraumático (TEPT), cuadros ansioso-depresivos y somatizaciones. La Revista interna del SAMUR, CLAVE 20, se constituye como un canal eficaz y directo a la hora de hacer llegar mensajes a los trabajadores. Objetivos Configurar y difundir el Debriefing como técnica preventiva para el TEPT. Buscar nuevos canales de comunicación que favorezcan el autocuidado como elemento eficaz de protección en la prevención de riesgos laborales. Material y método Revisión bibliográfica para dimensionar la situación actual del TPET y su prevención mediante el Debriefing Psicológico. Se utilizó Clave 20 para su difusión. Resultados El Debriefing no esta extendido en el personal de emergencias en este país. La intervención, a través de la estructuración de la experiencia traumática cognitiva y emocional, pretende evitar la cronificación de síntomas de estrés agudo y detectar a las personas que puedan necesitar ayuda psicológica especializada. Se desarrolla en dos sesiones, la primera entre las 48-72 horas después del suceso y la segunda entre las 6 u 8 semanas. Fases: I.- se presentan los objetivos y normas del grupo. II.-

Reconstrucción del suceso evitando la retraumatización. III.- Abordar los pensamientos que Detectar ideas que pudieran cronificar la victimización, culpa y ansiedad. IV.- Ser consciente de las emociones asociadas. V.-Fase de intercambios donde el grupo pasa a ser un factor de apoyo social, de alivio y tranquilidad. También tiene objetivo de normalizar los síntomas y proponer tareas para ir integrando lo sucedido. VI.- Poner un punto y final al suceso. VI.I- Conclusión donde se resume la sesión Se ofrece la disponibilidad de apoyo intersesiones. La técnica no es una psicoterapia, sino que está basada en principios de la intervención en crisis.. La revista CLAVE 20 se repartió en mano a todos los trabajadores. La tirada es de 2.000 ejemplares. Conclusión. Importante adoptar mediadas preventivas que eviten las consecuencias adversas de la cronificación de síntomas ante incidentes críticos, por el un alto sufrimiento psicológico,deterioro en la calidad del trabajo y alta conflictividad interpersonal. Es una estrategia eficaz conseguir que la promoción de la salud adquiera la categoría de "noticia".

INCORPORATION OF TROPONIN T IN THE PREHOSPITAL EVALUATION OF CHEST PAIN

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Objective: Determination of the markers of myocardial damage is an important diagnostic and prognostic element in the management of chest pain. This paper aims to evaluate the feasibility of the quantitative pre-hospital determination of Troponin T (TnT) and its diagnostic and prognostic value. Methods: Patients over 25 years of age seen by the prehospital emergency services for acute chest pain were included. Apart from the clinical variables, electrocardiogram (ECG) and semi-quantitative TnT measurement (TnT- <0.05 ng/ml, TnT+ for values between 0.05 and 0.1 ng/ml and TnT++ => 0.1 ng/ml) were performed. Follow-up was performed on admission and at six months, with descriptive statistical and survival analyses. Results: A total of 597 patients were included in the final analysis. The mean age was 66 years and 61.3% were male. The TnT determination was positive in 71 (11.9%) cases, 22 TnT+ and 49 TnT++. The final diagnosis was of Acute Myocardial infarction (AMI) or Unstable Angina (UA) in 60 (84.5%) of these 71 patients. In the first six months, 53 (8.9%) patients died. Of these, 19 had positive TnT results (5 TnT+ and 14 TnT++). The mortality at six months was significantly higher in older patients or in those with positive TnT values or with the hospital diagnosis of AMI or UA. TnT behaved as an independent predictive variable for mortality. Conclusions: The accurate semi-quantitative determination of TnT is possible in the pre-hospital setting and provides an objective datum directly related to the final diagnosis and to the patient's prognosis.

PACIENTES TRATADOS CON VENTILACIÓN MECÁNICA NO INVASIVA (VMNI) TRAS INGRESO POR DESACOMPENSACIÓN DE PROCESO CRÓNICO DE BASE. OXIGENOTERAPIA CRÓNICA DOMICILIARIA (OCD) COMO FACTOR DE RIESGO

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Introduccion: Los procesos respiratorios crónicos descompensados son subsidiarios, con frecuencia, de ventilación mecánica invasiva que, sin embargo, no es posible en algunos pacientes debido al avanzado estado de su proceso de base. Objetivos: Nuestro objetivo era determinar qué pacientes se benefician de la VMNI a su llegada al hospital así como las posibles variables que determinen el pronóstico a corto plazo de los mismos. Metodologia: Se estudiaron consecutivamente durante 24 meses los pacientes con enfermedades respiratorias de base ingresados por descompensación de su enfermedad y que, cumpliendo criterios clínicos y analíticos para recibir ventilación mecánica, fueron desestimados para intubación orotraqueal por el estado avanzado de su enfermedad, recibiendo en su lugar VMNI mediante BiPAP. Resultados: Se estudiaron 57 pacientes con una edad de 69.16 años (DE 13.67), 30 hombres y 27 mujeres. No existían diferencias significativas respecto a edad y sexo entre los fallecidos y los supervivientes. Los procesos de base de los pacientes eran: 34 EPOC y 23 NO EPOC (12 pacientes con patología toracógena y 11 con Síndrome de Obesidad-Hipoventilación). La mortalidad total del grupo fue del 14%. Sin embargo, los pacientes con EPOC tenían una mayor mortalidad que los NO EPOC (17.65% y 7.41% respectivamente), aunque las diferencias no eran significativas. La proporción de pacientes portadores de OCD previamente a su ingreso entre los fallecidos (75%: 6/2) era superior a la de los supervivientes (42.86%:21/28) (p<0.05). La Odds Ratio de mortalidad para los pacientes ventilados que son portadores de OCD es de 4 (IC 95% 1.23-12,96). Tabla 1. Proporción de pacientes fallecidos portadores de OCD. OCD Supervivientes Fallecidos SI 21 6 NO 28 2 TOTAL 49 8 Conclusiones: 1. Los pacientes con descompensación por una enfermedad respiratoria crónica de base que reciben VMNI tienen una mortalidad del 14%, relativamente baja. 2. Dado el pequeño tamaño de la muestra, aunque las diferencias de mortalidad entre EPOC y NO EPOC no fueran significativas, sí pueden indicar una tendencia a una mayor mortalidad de los pacientes con EPOC, que duplica a la de los NO EPOC. 3. En los pacientes estudiados, ser portador previo de OCD supone un mayor riesgo de mortalidad, a pesar de recibir VMNI cuando sufren una descompensación de su proceso crónico de base.

PREDICTING DEATH IN ELDERLY PATIENTS ATTENDED IN THE EMERGENCY WARD WITH COMMUNITY-ACQUIRED PNEUMONIA.

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Community-acquired pneumonia (CAP) is the first leading cause of death in the elderly. Objective: to examine admission prognostic factors and outcome of CAP in inmmunocompetent elderly patients hospitalized through the emergency room in Catholic University Hospital between July 1, 1999 and June 30, 2001. Results: during a 24-month period, 306 elderly patients (80±7 years) were evaluated; 54% were male, 89% with underlying disease (specially chronic cardiovascular, neurologic and respiratory diseases), 97% were treated with 2nd or 3rd generation cephalosporins. Mean hospital length of stay was 10 days, in-hospital mortality was 9.8% and in 30-day follow up was 13.1%. As compared to younger CAP patients, multiple comorbidity, altered mental status, hypoxemia, high blood ureic nitrogen at admission and ICU assistance were more frequent in the elderly. Also, length of stay and mortality in the hospital and 30-day follow up were higher in elderly patients. In routine clinical practice, microbial etiology was established in 25% of cases. The most frequent pathogens isolated were Streptococcus pneumoniae (10.5%), Gram negative bacillus (5.2%), Staphylococcus aureus (4.2%) and Haemophilus influenzae (3.9%). In multivariate analysis, admission prognostic factors associated with mortality in the hospital were advanced age (over 83 years), absence of cough, low blood pressure and hyperphosphatemia. CAP features in elderly patients requiring hospitalization are atypical, severe presentations are frequent and mortality is high. Admission prognostic factors described in this study can help the attending physician in emergency room to identify those who require special care in the hospital due to high risk of death.

DIAGNOSTIC AND PROGNOSTIC VALUE OF C-REACTIVE PROTEIN IN COMMUNITY-ACQUIRED PNEUMONIA HOSPITALIZED ADULT PATIENTS

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It has been suggested that C-reactive protein (CRP), a marker of inflammation, could be used as an effective diagnostic and prognostic tool in community-acquired pneumonia (CAP). The diagnostic and prognostic value of admission serum levels of CRP was investigated on adult patients with CAP admitted through the emergency department in Catholic University Hospital. Results: during a 24-month period, 323 patients (68±1 years) were evaluated; 52% were male, 73% with underlying disease (specially chronic cardiovascular, neurologic and respiratory diseases), 93% were treated with 2nd or 3rd generation cephalosporins, 22% were directly admitted to ICU and 12% required mechanical ventilation. Mean hospital length of stay was 10 days (range: 1-54 days), in-hospital mortality was 6.8% and in 30-day follow up was 9.1%. Serum CRP levels were elevated on 97% of patients (mean±se: 19±2 mg/dl), meanwhile only two-third of cases had fever or leukocytosis at presentation in emergency ward. Admission CRP levels were significantly higher in young patients without comorbidities, those who had received antibiotics before admission, required mechanical ventilation or had bacteremic CAP. However, admission CRP levels did not correlate to pneumonia severity index, hospital length of stay, and risk of death at hospital and 30-day follow up. Admission CRP levels did not predict hospital mortality, like other well-recognized predictors of mortality. Metabolic acidosis, low blood pressure, presence of chronic neurological disease and absence of cough at presentation were independently associated with hospital mortality on multivariate analysis. Admission serum CRP level was a sensitive marker of community-acquired pneumonia in adult patients attended in the emergency room, but did not predict clinical evolution and risk of death of hospital-treated patients with community-acquired pneumonia.

A 24-HOUR AREA FACILITY AS AN ADDITIONAL UNIT TO THE EMERGENCY DEPARTMENT

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Because of the progressive increase of health care demands in the emergency departments, saturation and collapse of these services frequently occur. Saturation depends on three factors: influx of patients, space dimensions, and mean patients' length of stay in the emergency department. Objective: To assess the usefulness of a 24-hour area an additional facility the emergency department and to hypothesize on the dimensions of such area in a general teaching hospital. Materials and methods: Candidates to be admitted to the 24-hour area were all patients who stayed for more than 12 hours in the emergency department and were discharged home. A retrospective study of the year 2002 in all candidates for being admitted in this new area was conducted. The mean length of stay for these patients and the average occupancy per day were calculated. Average daily occupancy (number of beds needed) was calculated by the following equation: Total length of stays in hours (mean stay · no. patients) Average daily occupancy = Study period (days) 24 Results: Month No. patients Mean length of stay (hours) Average daily occupancy January 282 35.41 13.42 February 196 33.25 9.70 March 205 27.76 7.65 April 224 31.74 9.87 May 264 33.33 11.83 June 252 31.17 10.91 July 231 27.84 8.64 August 205 33.25 9.16 September 242 28.25 9.49 October 239 28.48 9.15 November 224 29.09 9.05 December 251 32.17 10.85 Conclusions: To have available an additional 24-hour area facility to the emergency department is useful and improves the drain of patients in the emergency department. The dimensions of this 24-hour area should be estimated for each center, that in our paticular case, a space for 10 beds would be required.

PROCEDIMIENTO DE DESFIBRILACION A BORDO DE AMBULANCIA DE SOPORTE VITAL BÁSICO CON DEA

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El Servicio de Urgencias Canario (SUC) ha puesto en marcha en Canarias a mediados de enero de 2003 el Procedimiento de Desfibrilación a bordo de Ambulancia de Soporte Vital Básico (ASVB) con Desfibrilador Externo Automatizado (DEA) Bifasico, tras un trabajo de investigación con un total de 13 supuestos y 39 descargas sobre maniquí Ambu-DesfiR. Objetivo: Desarrollo procedimiento estándar para la utilización del DEA en ASVB, para disminuir los riesgos a bordo de la unidad. Metodologia: Durante el curso del año 2002 (Julio-Septiembre) el SUC realizó un trabajo de investigación con 13 supuestos en ASVB donde se realizaron tres descargas a 130, 130 y 180 julios, con el vehículo en marcha y totalmente parado. Resultados: 13 supuestos (parados, a 50 Km/h, 80 Km/h, 100 km/h y 110 km/h) con 3 descargas cada uno, con éxito en todos los casos y sin problemas en la cabina asistencial ni en la cabina de conducción. Conclusiones: 1. Trasportar a todo paciente con riesgo potencial de sufrir una Parada Cardio Respiratoria (PCR) o reanimado tras sufrir PCR sobre el colchón de vació, colocándolo sobre la camilla de la ambulancia. Proceder a extremar las medidas de seguridad con respecto a la sujeción con las cinchas (no usar hebillas metálicas), tanto del colchón como de la camilla. Asegurarse que queda perfectamente aislado del entorno antes de empezar el traslado. 2. Identificar una situación de PCR en ruta 3. Poner en conocimiento del conductor la situación para que aminore la marcha o pare el vehículo, realizar una conducción sin movimientos bruscos y comunicar a la sala de coordinación que se ha producido una PCR y se va ha utilizar el DEA. 4. A continuación tras oír el mensaje procederemos: 4.1. Encender el DEA y seguir las instrucciones. 4.2. Colocar los parches en el pecho desnudo del paciente y enchufar el conector, colocar el paciente en posición decúbito supino con los brazos alineados a lo largo del cuerpo. 4.3. Pulsar la tecla de análisis (si es necesario). 4.4. Tener muy presente que se deberá extremar las medidas de seguridad con el oxígeno, cerrar todas las fuentes de oxígeno desde el caudalímetro. 4.5. Desconectar otros dispositivos en uso con el paciente: monitorización, pulsioxímetria. 4.6. Desarrollar algoritmo de (SVB) con DEA y seguir las instrucciones. 4.7. Avisar al conductor si tenemos algún problema con las maniobras de reanimación del DEA y necesitamos parar el vehículo. 4.8. En el caso que durante el desarrollo de la técnica, el paciente recupere signos de circulación y pulso, debemos interrumpir el RCP y proceder según algoritmo de SVB. Comunicar esta circunstancia al conductor para que la trasmita a la sala de coordinación. 5. Solo podrá realizar la técnica aquel personal que haya sido cualificado por el SUC para ello. 6. Una vez realizada la misión, se deberá proceder a la limpieza, reposición del material fungible y mantenimiento (Recargar Batería) del equipo adecuadamente.

NON INVASIVE MECHANICAL VENTILATION (NIMV) IN A LOCALLY BASED HOSPITAL

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Patients with chronic obstructive pulmonary disease (COPD) and respiratory acidosis who do not respond to conventional treatment form the group of patients who can gain most benefit from NIMV. Objective: To evaluate the effectiveness of the treatment with a BIPAP system of MIMV in the A & E Department of an Area Hospital. Methods: Palamós Hospital has 100 acute beds and no ICU. Area covered > 100,000 inhabitants. The A & E Department attends more than 45,000 cases annually (approximately 2% are COPD) We have the use of S/T-D30 BIPAP NIMV equipment. We carried out an observation study from 1st January 2002 to 31st March 2003. Included in the study were all the patients with COPD with respiratory acidosis (pH<7.35) who had not improved with conventional treatment, excluded were those with severe encephalopathy (Glasgow<10), hemodynamic instability (TA<90mmHg), facial deformity, difficulty in regulating secretions and tracheotomy. In a total of 24 patients, the following parameters were considered: age, sex, functional state of COPD, acid-base equilibrium, on commencing the treatment, after one hour, 3 hours, 9 hours and 24 hours, with machine parameters (spontaneous type (S) and spontaneous/controlled (S/T), values of IPAP EPAP, leaks and respiratory volumes. We also evaluated the causes for the interruption of treatment, secondary effects, the total time of BIPAP and that elapsed prior to the first interruption. Results: The average age of the group was 70 (85 – 43) 15 (62.5%) male and 9 (37.5%) female. Functional state I: 3 (12.5%); State II: 9 (37,5%); State III: 9 (37.5%) and without statistics 3 (12.5%) The average initial pH was 7.25 (+/- 0.05). The normalization of the pH (7.49) was obtained in 2 (8.3%) at the 3rd hour from the beginning of the treatment, in 7 (33.3%) at the 9th hour and in 15 (58.33%) at the 24th hour. The parameter of the machine most frequently used was the S type in 21 (87.5%) of the patients, with an average value of IPAP/EPAP of 11.4. The average of the leaks did not pass 171/min (+/-8.3) (N<30) and the average of the volumes was superior to 500 ml (+/-281). The treatment was interrupted in 2 (8.3%), one for cardiac arrest and the other for intolerance. The most frequent secondary effects were facial skin injuries in 12 (50%), anxiety in 9 (37.5), abdominal distention in 4 (16.6%) and claustrophobia in one. The average treatment time with BIPAP was 26.4 h (+/-16.11) and the average time until the first interruption of the machine was 13h (+/-7.18). Conclusions: The normalization of the pH is achieved in the first 24 hours, with an average total time of BIPAP that does not exceed 48 hours. We consider that this is a technique to be applied in an A & E Department of an Area Hospital with no ICU, with a good level of tolerance on the part of the patient and with few secondary effects.

PAPEL DEL AIRBAG EN LOS TRAUMATISMOS TORÁCICOS

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Introducción: Los dispositivos de seguridad en los vehículos han contribuido a la disminución de la morbimortalidad de los accidentes de tráfico (AT). Alguno, como el airbag, puede a su vez ser responsable de lesiones como la contusión miocárdica. La variabilidad lesional, falta de pruebas diagnósticas específicas y de clínica evidente en un paciente politraumatizado, hacen que el diagnóstico de la contusión miocárdica sea un desafío a nivel prehospitalario. Caso clínico: Varón de 60 años, sin antecedentes cardiológicos, sufre AT (colisión frontal) viajando de copiloto con cinturón de seguridad. Actuación de los airbag delanteros. TA:114/70 mmHg. FR:16 rpm. FC:71 ppm, arrítmico. SatO2 :100%. GCS:15. Eupnéico, bien perfundido y sin focalidad neurológica. Carótidas arrítmicas y simétricas. No ingurgitación yugular, dolor cervical ni contracturas reflejas. AC: tonos conservados, arrítmico. AP: mvc. Tórax normal. Dolor precordial continuo, no opresivo y no irradiado. ECG: fibriloflutter con respuesta ventricular lenta. Traslado hospitalario para valorar posible contusión miocárdica. Discusión: El paciente puede estar asintomático, con dolor torácico típico cardíaco que no responde a nitroglicerina o no cardíaco que aumenta con movimientos respiratorios. Puede haber manifestaciones de insuficiencia cardíaca izquierda y hasta clínica de taponamiento cardíaco según el daño ocasionado. Ante la sospecha clínica, son exámenes importantes: ECG de 12 derivaciones (anomalías onda T y segmento ST, onda Q previamente no existente, taquicardia sinusal, extrasístoles ventriculares monofocales, FA y bloqueos de rama derecha), CPK-MB y CPK-MB/ CPK, ecocardiografía, radiología torácica, troponina T y gamma grafía con pirofosfato. Los sujetos asintomáticos requieren monitorización electrocardiográfica durante 24 horas. A nivel prehospitalario consideramos fundamental la realización de un ECG de 12 derivaciones ante todo accidente de tráfico con sospecha de traumatismo torácico.

CHEST PAIN UNIT: EXPERIENCE OF HOSPITAL CLINIC AFTER 4 MONTHS OF WORKING

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Background and Objective: Chest Pain Units (CPU) have proven to be useful in decreasing hospital admissions for patients with suspected acute coronary syndrome (ACS) in the US. In Spain, development of these units has been scarcely analyzed. We evaluated the first 1000 patients presenting to the Emergency Department (ED) with possible ACS. Methods: We evaluated patients with chest pain (CP) who attended our ED between June 26- October 20, 2002. Our algorithm assesses patients at two points. After clinical evaluation and first ECG the patients are classified as: 1-ST-elevation acute myocardial infarction (STEAMI), 2-definitive non ST-elevation ACS (NSTEACS), 3-probably ACS, and 4-no coronary CP. Patients in group 3 remain in the CPU and follow a protocol of continuous ECG monitoring and serial cardiac markers (CPK-MB and troponin I) at arrival and 6-9h later. After this time, patients are reassessed and classified as: A-high-risk ACS, B- intermediate risk ACS, and C- low risk ACS/probably ACS. In the group C patients an ECG exercise test was performed under a cardiologist's supervision, when it was possible, before discharge. Results: We analyzed the first 1000 patients admitted at the CPU. There were 556 (56%) male and 444 (44%) females with a mean age of 57.8 years (range 14-95). The mean waiting time to the first ECG was 14 ± 11.3 minutes. At this point, 49 (5%) were diagnosed as having a STEAMI, 182 (18%) as a definitive NSTEACS, 289 (30%) as a probably ACS, and 480 (48%) as having a no coronary CP syndrome. 30/49 patients with STEAMI were treated with primary angioplasty and 19/49 with thrombolysis (3 of them required rescue angioplasty). The mean waiting time was 81.5 ± 57.7 min for angioplasty, and 31.3 ± 29.3 min for thrombolysis. After the observation period, the 289 patients in group C with "probably ACS" were diagnosed as: 20 (7%) high-risk ACS, 99 (34%) intermediate risk ACS, and 170 (59%) low risk ACS/probably ACS. After cardiologist evaluation, 98/170 patients were selected for an ECG exercise test. Twelve of them were positive, 81 negative and 5 inconclusive. Four of 170 patients with low risk ACS/probably ACS were admitted and the 166 remaining patients were discharged. Conclusions: The CPU has demonstrated its usefulness for evaluating patients with possible ACS in our ED. It has allowed us to safely discharge patients who would otherwise have been admitted, using low cost complementary tests (serial cardiac markers and ECG exercise test). On the other hand, the CPU has reduced the delay in the identification and treatment of ACS in our ED.

EFICACIA DE LAS MOTOCICLETAS EN LOS TIEMPOS DE LLEGADA DE SAMUR-PC

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Los Servicios de Emergencia Prehospitalarios deben de poner los medios necesarios para reducir al máximo los tiempos de respuesta ante una situación de emergencia, la problemática de tráfico es un factor en contra a la hora de dar respuesta por unidades de SVA y SVB, este motivo hace pensar en utilizar motocicletas. SAMUR-P.C.es un servicio de emergencias prehospitalario de Madrid,cuenta con una unidad de motocicletas de Primera Intervención (MPI) pilotadas por Técnicos, cuya función principal es la valoración y atención inicial de un paciente y la desfibrilación precoz ante una P.C.R. Objetivos: Relacionar los tiempos de llegada de éstas , así como el motivo de la demanda y la resolución de la misma en el SAMUR-P.C. Metodologia: Descriptivo transversal retrospectivo SAMUR-P.C Activaciones realizadas por las MPI.año 2002. Criterios de exclusión: 7 registros con datos inconsistentes. Variables estudio: Tiempos de llegada al lugar del suceso, Distritos Municipales de actuación, tipo de suceso y resolución final de la demanda asistencial. Estadística descriptiva para cada variable cualitativa mediante distribución de frecuencias y medidas centrales de dispersión. Análisis univariante mediante T de Student. Resultados: 439 intervenciones de las MPI año 2002 el Tiempo medio de respuesta:5'06''(DE: 3'19''),I:C:95% de 4'44''-5'28'', con mediana de 4'51'' y rango (0'00''-16'16''), siendo en el Distrito Centro, con un 66,74% del total de las intervenciones, de

4’47’’(DE: 3’41’’) para un I.C. del 95% de 4’20’’-5’14’’, Mediana:4’28’’ y rango (0’00’-15’46’’); comparativa de tiempos medios de respuesta entre Distrito Centro con resto :significación estadística (p<0,05). Tipo de intervención:enfermedades 38,72% y accidentes no de tráfico 29,16%. Resolución demanda derivados a SVA y SVB:27,33%, atendidos sin otro recurso:47,84% y otros:24,83% Conclusiones: Obtención tiempos de respuesta buenos, óptimos para DESA precoz., que comparativamente en Distrito Centro son menores que resto a pesar características.Intervenciones mayoritariamente enfermedades y accidentes no de tráfico; además, resolución in situ :72,67%.

PACIENTES CRÍTICOS ATENDIDOS POR SAMUR-PROTECCIÓN CIVIL: CONCORDANCIA DIAGNÓSTICA CON HOSPITAL RECEPTOR

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Introducción. La implementación de los servicios de emergencia médica prehospitalario (SEMP), ha supuesto una disminución importante de la morbi-mortalidad, lo que ha contribuido a un gran avance en la salud pública. Los profesionales en vía pública, con condiciones adversas de situación, climáticas, sociales y con medios limitados, actúan con celeridad, pues de su intervención eficaz puede depender la vida del paciente. Esto dificulta el emitir un diagnóstico definitivo preciso. El paciente crítico, estabilizado, se transfiere al hospital, donde los facultativos hospitalarios actúan en un medio mas idóneo y con los recursos que le permite un dispositivo asistencial fijo, emitiendo finalmente un diagnóstico definitivo. Objetivos. Determinar la concordancia diagnóstica entre los ámbitos prehospitalario y hospitalario y conocer la supervivencia de estos pacientes al alta hospitalaria. Material y métodos. Descriptivo transversal-longitudinal retrospectivo. Emplazamiento: SAMUR PC. Ayto de Madrid y Hospitales Receptores. Selección de la población: pacientes que durante los años 2001- 2002 recibieron asistencia sanitaria y fueron trasladados mediante preaviso hospitalario. Tamaño muestral: estimación muestral con proporción de grado de acuerdo esperado del 50%, precisión del 3%, un nivel de confianza del 95%, para lo que se estimaron necesarios 617 pacientes. Muestreo aleatorio simple, proporcional al número de pacientes asistidos por los diferentes hospitales. Sesgos: de sospecha diagnóstica que no invalida el estudio. Variables: sociodemográficas, tiempos, motivo de ingreso, diagnóstico emitido por SAMUR P.C. y Hospital (CIE.9 MC), supervivencia. Aspectos éticos. Confidencialidad de los datos. Recogida, proceso y análisis de datos: se diseñó una hoja de recogida de datos y se revisaron las Historias Clínicas de ambos ámbitos. Base de datos en Access 97 para Windows NT profesional.. Estadístico: mediante SPSS V.10.0. calculo de Indice de Kappa (k). Resultados. Se estudiaron los 107 pacientes que conforman el tamaño muestral del 2º centro hospitalario en frecuentación, 89 (83,2 %) varones y 18 (16,8 %) mujeres (p< 0,01). La edad media para varones fue 47,04 años (DE:18,78) con IC del 95%, 43,05 –51,02 y para la mujeres de 46,67 años (DE:27,96) con IC del 95%, 32,77-60,58, no significación estadística entre la edad media según los sexos. El rango de edad de 89,25 años (0,98-90.23). Motivo del ingreso por enfermedad en 43,9 %, accidente de tráfico 30,8%, agresiones 15,9%, accidente casual 5,7% y autolisis 3,7%. Diagnósticos mas frecuentes corresponden a traumatismos, seguido de enfermedades del sistema circulatorio. La concordancia diagnóstica ha sido muy alta K= 0, 90; IC del 95%, 0,85 - 0,95. La estancia media al alta hospitalaria fue de 15,83 días (DE 22,14) que para los supervivientes fue de 21,09 días (DE 23,97). La supervivencia al alta hospitalaria fue del 63,6% y fallecidos el resto, de los cuales 41 % mueren tras estancia mayor de 48 horas. Conclusiónes. La muy alta concordancia diagnóstica obtenida y la supervivencia de pacientes con un elevado potencial de mortalidad “in situ” derivada de su gravedad, ha de servir de estímulo para seguir impulsando una atención sanitaria de calidad. Es imprescindible generar nuevos canales de comunicación directos entre los sistemas de emergencias prehospitalario y hospitalario así como la interrelación de sus profesionales, para favorecer la investigación, cuyo objetivo último es mejorar la intervención sanitaria, responsabilidad con los pacientes que es compartida entre ambos niveles asistenciales.

ANÁLISIS DE LOS ENFERMOS QUE ABANDONAN NUESTRO SERVICIO DE URGENCIAS

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Objetivo: analizar las características de los pacientes que abandonan nuestro servicio de urgencias hospitalarias (SUH) antes de ser visitados y la importancia del tiempo de espera como factor determinante del abandono. Metodología: análisis del tiempo de espera y valoración de encuesta telefónica a los usuarios que abandonaron nuestro servicio de urgencias durante el mes de octubre del 2002. Resultados: abandonaron 129 pacientes (2.9%). La mediana del tiempo de espera de los abandonos fue de 99 minutos (cuando la mediana global de 2002 fue de 59 minutos). El 71% de los abandonos se produjo entre los registrados durante la franja horaria que va de las 14 a las 22 horas. La edad media fue de 36 años y hubo un 53% de hombres. Se obtuvo respuesta a la encuesta en 65 (50%) casos. Encuesta: 64 pacientes vinieron por iniciativa propia; el tiempo de espera subjetivo fue similar al real; 16% no consideró el tiempo de espera como excesivo; 16% la razón de su abandono no fue el tiempo de espera; 9% no consideró que el motivo de su visita fuera urgente; 42% no consultó después a ningún médico; de entre éstos, ninguno precisó de ingreso hospitalario; entre éstos, el 60% se diagnosticó de patologías que generan dolor moderado-intenso; 77% del total volvería a consultar a nuestro servicio; sugerencias de mejora: modificar el sistema de clasificación de gravedad en el 40% de casos y disminuir del tiempo de espera en el 22% de casos. Conclusiones: 1. El perfil de enfermo que abandona nuestro SUH es el de una persona joven, que acude por propia iniciativa, afecto de patología álgica de buen pronóstico, que abandona porque considera que ha esperado demasiado tiempo, tras dos horas de espera real, posteriormente consulta con otro médico, no precisa de ingreso hospitalario, piensa que volvería a nuestro servicio de urgencias si lo precisara en el futuro y sugiere que mejoremos nuestro sistema de clasificación de gravedad y que disminuyamos el tiempo de espera. 2. Nuestro estudio confirma los resultados de otros autores respecto a la importancia del tiempo de espera como factor que determina el abandono y orienta hacia que existan otros factores contribuyentes (patología álgica, inadecuada clasificación de gravedad).

¿CONTINÚA EL PACIENTE EL CALENDARIO VACUNAL ANTITETÁNICO INICIADO EN URGENCIAS?

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OBJETIVOS 1.Saber qué porcentaje de las personas a las que se les inicia la vacunación desde urgencias, prosigue con ella en la 2ª dosis. 2.Saber si hay relación con la edad para el seguimiento 3.Saber si hay diferencias entre sexos para el correcto seguimiento del calendario vacunal 4. .Saber motivo de no seguimiento de la 2ª dosis. METODOLOGÍA Estudio prospectivo, descriptivo, durante Febrero, Marzo y Abril 2002, donde se incluye a todo paciente al que se le inicia la vacunación en el servicio de urgencias con la 1ª dosis del toxoide antitetánico. Se recogen: edad, sexo, teléfono de contacto y día de inicio del calendario. Se realizó llamada telefónica a los 40 días para preguntar si prosiguieron con la 2ª dosis, y en caso negativo, preguntamos el motivo por el cual no se prosiguió. En esta llamada aprovechamos para recalcar la importancia de la vacunación, e indicarles que todavía estaban a tiempo de acudir a su centro de salud para vacunarse. RESULTADOS A 69 pacientes se les inicia el calendario, de los cuales el 55% NO y el 45% SI prosiguió la 2ª dosis.De los 46 varones, el 64% NO y el 36% SI, y de las 23 mujeres, el 39% NO y el 61% SI prosiguió la 2ª dosis. Por edad,15-20 años el 80% NO, 21-30a 72% NO, 31-50a 52% NO, 51-60a 73% NO, 61-99a 16% NO continuó la 2ª dosis del toxoide. Motivos para la NO continuación;80% olvido, 10% ya estaba vacunados CONCLUSIONES El imcumplimiento general de la vacunación, creemos que puede ser debido a la falta de información, y esto les lleva al olvido, dejadez, a no darles la importancia que tiene el cumplir bien el calendario. Ello nos ha llevado a entregarles junto con la tarjeta de vacunación, una hoja informativa en la cual se explica, la gravedad de la enfermedad , la importancia de la continuidad de la vacunación y se le indica que se ponga en contacto con su Centro de Salud. Valoraremos en un año con un estudio comparativo si este protocolo sirve para mejorar el estado de la vacunación en la población.

ANALYSIS OF CORONARY RISK FACTORS FOUND IN PATIENTS WITH DIAGNOSIS OF AMI DURING THE YEAR 2000

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Objectives: To study all patients diagnosed with AMI who were admitted to the Coronary Unit of Txagorritxu Hospital (Vitoria) during the year 2000 to identify risk factors. Methodology: We reviewed clinical records of 80 randomly selected patients treated in our Unit during the year 2000. We stratified data into two age categories (patients younger than 50, and patients older than 50), and by patient gender to examine if there were any differences and to take note of the risk factors simultaneously in each patient. Information was collected from the patient and their relatives and then analyzed. Frequency of coronary risk factors were examined, including: tobacco use (more than 10 cigarettes per day), hypercholesterolemia (levels greater than 250 mg/dl), hypertension (SAP higher than 160 mm Hg and DAP higher than 90 mm Hg), diabetes (glycemia higher than 130 mg/dl), family history, and previous coronary artery disease. Results: Men younger than 50: 1.) 25% of overall men. 2.) 100% smokers. 3.) 50% hypercholesterolemia. 4.) 42% with family history. 5.) 25% previous coronary record. 6.) 25% hypertension. Men older than 50: 1.) 75% of overall men. 2.) 88.5% smokers. 3.) 43% hypertension. 4.) 17% previous coronary record. 5.) 17% diabetics. Women younger than 50: 1.) 25% of overall women. 2.) 100% smokers. Women older than 50: 1.) 75% of overall women. 2.) 75% previous coronary record. 3.) 75% with family history. 4.) 50% hypertension. 5.) 25% diabetics. 6.) 25% hypercholesterolemia. Associations among risk factors included 28.8% smoked and had hypertension, 22.5% smoked and had a family history, 17% smoked and had hypercholesterolemia, and 15% smoked and had a history of coronary artery disease. Conclusion: The main risk factors included tobacco use, hypertension, family history, hypercholesterolemia, history of previous coronary artery disease and diabetes.

STUDY OF PATIENTS DIAGNOSED WITH AMI DURING THE YEAR 2000

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Objectives: To detect the associations between AMI and sex, age, electrocardiographic location and patients' symptoms. Methodology: This observational study, examines the clinical cases of 80 patients chosen at random during the year 2000, who presented initially to our advanced life-support unit (Territorial Emergency Unit of Alava) and were subsequently admitted to the Coronary Unit of Txagorritxu Hospital (Vitoria). Results: The age group with the highest risk of suffering an AMI starts at 70 years old. The average age in women was 68.8 years, and in men was 61.5 years. The overall average age of the study sample was 65.1 years. The sample showed a predominance of men, with a ration of 9/1 ratio with respect to men/women. The electrocardiographic location of the AMI was: 46.2% of the cases in lower-back locations; 37.4% of the cases in front locations, and in 16.4% of the cases, it was not located. Clinical symptoms: 1. Initial symptoms: 57.7% had heart pain in the center of the thorax that extended to other parts (arms, legs, shoulders and the top of the stomach); in this context the predominance of extension to the right arm was 53% of the preceding cases. 2. Symptoms with pain in the middle of the thorax: nausea, vomiting, sick and/or sweaty feeling, did not reach any significant difference among patients who presented with these symptoms and those who did not, because there was a balance between them. 3. Less frequent symptoms noted: 9.6% of the cases had an initial pain at the top of the stomach that extended to the arms; 7.7% described pain in the arms and throat extending to the center of the thorax. 3.8% had pain and itch in both arms. Conclusion: 1) We noted a higher incidence of AMI in those 70 years of age or higher. 2) 90% of the cases were men. 3) The predominant electrocardiographic location was in the lower-back region. 4) Initial symptoms were predominantly in the middle of the thorax, extended to the arms, back, shoulders and the top of the stomach with an increasing effect.

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The problems discussed in this master thesis include: organization of medical service at the international airports and emergency planning and management of accidents and disasters at the international airports. the goal of the thesis is to contribute to the establishment of the standards concerning the organization of emergency medical service and emergency planning at the international airports and to propose the methodology for the research and education in this field of disaster medicine. The hypothesis of this master thesis is: the standardized methods improve efficiency of emergency medical service in case of an accident or a disaster at the airports. the methodology used in this master thesis includes: descriptive method used for the detailed description, including the literature review, analytical method used for the analysis of the data gathered from the questionnaire, designed to cover the organizational aspects of the medical service and emergency medical planning and systemic method, used in order to observe the problem as the integral part of the system and to analyze the complex relations between the subject and its environment - the delphi method. although this method is not new, it is the first time, according to the available resources, that this method is applied in this context of disaster medicine. The following measures are proposed to further analyze the problems addressed in this master thesis: production of the standards for standards, mathematical models of simulation and the application of the system of 'virtual reality' for the computer simulation of an accident or a disaster at the airport and the production of the appropriate expert systems for both - educational purpose and decision support: the combination of the expert system that provides "knowledge" and the expert system that provides "know how" assuring thus the presentation of knowledge in learnable way.

THE STATUS OF THE HOSPITAL DISASTER PLAN IN THE NETHERLANDS

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Introduction: During a disaster a hospital meets its limits for its care. To be prepared to this limit a hospital needs a Hospital Disaster Plan (HDP). In 1987 a Model HDP as a line of conduct was issued by the government. In 1997 an inquiry was conducted into the status of the HDP. This inquiry is similar to this study and serves as comparison. Since 2000 an appointment of a Disaster Manager is demanded and financed by the government into which this inquiry will look too. Materials and Methods: In 2002 a questionnaire was sent to all general hospitals. The status of the HDP could be scored as: 1 = no plan, 2 = plan in preparation, 3 = plan available, 4 = as score 3 + tested, 5 = as score 4 + regular drills/upgrading. If the score was < 5 the reason for this was asked. The average score was calculated by addition of all scores and dividing the sum by the number of items. The hospitals were divided after 12 regions and 3 sizes: Group 1: < 400 beds, Group 2: 400-600 beds, Group 3: >600 beds. Appointment and present medical background of disaster manager was asked too. Results: Response 95%. Average score 1997: 3,6. 2002: 3,8. Score = 5: 1997: 41%, 2002: 26%. Reason for score <5 in 2002: Financial: 60%, Organizational: 30%, Time:10%. Score = 5 according to size: Group1 1997: 26%, 2002 7%. Group 2 1997:59%, 2002 14%. Group 3 1997:50%, 2002:56%. Score = 5 according to region: 1997: 42% (5 regions). 2002: 50%(6 regions). Appointment of disaster manager in 2002: 100%, medical background (Physician, nurse): 80%. Conclusion: As they could freely score themselves this estimation is the result of the opinion of the hospital themselves. A hospital with a HDP but without regular drills/upgrading is not fully prepared to a disaster. In spite of the appointment of a disaster manager in 2002 only 24% (41% in 1997) is fully prepared. The ultimate result is that only 1 out of 4 hospitals in the Netherlands is fully prepared. This study should give a positive impulse for improvement.

CHEMICAL INCIDENTS: AN INTEGRATED APPROACH. EMERGENCY PLANNING, REGULATIONS, RESPONSE AND TRAINING IN UNITED KINGDOM

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Chemical incidents can happen anywhere at anytime. In this 21st century the human race is more industrialized than ever before. The pollution of the environment and release of chemicals in the atmosphere whether accidental or deliberate is becoming a major concern for the human race. The industrial areas, major port of entry to a country and warehouse locations where chemicals are stored are more prone for such incidents that can be accidental. The deliberate release of chemicals in the last few decades is a growing concern and the use of chemical weapons in various wars raises the alarm. In this article we will trace the history of chemical industry and various definitions as applied to chemical incidents. There is no single agency within the United Kingdom, which has all the skills, and resources, which may be needed. The key to an effective response is to apply sound principles, founded on experience and the need for a multidisciplinary approach for disaster management. In United Kingdom the emergency services use the term Major Incident rather than Disaster. The article will also focus on the role played by various organisations and national specialist resources for expert advice and government regulations as applied to chemical incidents. Examples of chemical incidents in UK and also incidents were Accident and Emergency department were closed due to inappropriate decontamination arrangements and insufficient training will highlight the necessity for an Integrated Emergency Management. This article will also highlight various courses and training programmes now running in preparing all the emergency services involved for Integrated Emergency Management.

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