

Conclusions: The use of TM II allows a saving of oxygen sources, not as essential in emergency situation as it could be in a disaster situation.

Key words: administration; carbon-monoxide; computation; disaster; model; oxygen; masks; Tusk Mask II
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A New Approach for Casting Fingers, Hands, or Arms within Seconds

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The authors present a new approach for casting, their experience with it, and compare its practicability with the usual techniques (plaster of Paris and casting with thermoplastics). The new approach is based on a Hungarian-Swiss patent called the "Chrisofix" concept. All of the corresponding splints have a corrugated, thin aluminium core covered with cotton- or polyamide-laminated polyethylene layers. The form of the individually adjustable splints/orthoses depends on the target joint/s of immobilisation. Thus, the limitation of function is reduced to the necessary minimum.

The comparisons of the different casting techniques discussed are based on the authors' experiences with the conventional techniques and with different types of splints based on the new approach in >100 cases partially during SFOR and KFOR missions, respectively. Reports from Hungarian National Institutes of Traumatology and Rheumatology are included in the discussion. Its quick applicability and its ability to ensure functioning of the uninvolved joints are the advantages of this new approach and are the reasons that make it so useful in field medical practice and disaster situations.

Key words: casting; "Chrisofix"; fractures; immobilization; orthoses; splints; techniques
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Drug Consumption in Traffic Accidents

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Introduction: Traffic accidents constitute an important cause of morbidity and mortality in developed countries, mainly in young people. In Spain, around 5,000 people die annually due to these accidents, with >100,000 injured. Drug and alcohol consumption, as well as the nonuse of safety measures, influence the incidence as well as the severity of the injuries of the traffic victims.

Objectives: We set out to evaluate the existing relationships between the consumption of alcohol or other drugs among injured drivers, with respect to the use or nonuse of safety measures and the severity of the injuries produced in the accident.

Methods: We studied 62 drivers involved in and injured from traffic accidents and who were transported to our Hospital Emergency Service. The classic descriptive variables were analyzed: age, gender, means of locomotion,

alcohol ingestion, drugs, use of safety measures, determination of type of toxic materials in the urine and blood alcohol levels, main diagnosis, index of gravity (Scale of Crams), and disposition of the patient.

Results: Of the study population, 68% were men (32% women), with an average age of 30.22 ±12.3 years. Only 45.2% of the persons used a car safety belt or helmet, 38% affirmed to have ingested alcohol, and 1.6% to have consumed another type of drugs before the accident. Moreover, blood alcohol level was >0.5 g/100 ml. in 57.3% and toxic materials were present in the urine in 16.1% (all the patients with positive toxic screens also had alcohol in their blood). Cannabis was the drug most frequently found (65.3% of the positive determination). Of these patients, 37.4% needed to be admitted to hospital, and 29.2% injured were considered to be injured seriously. Among those that had a positive result for alcohol in blood, 85.1% did not use safety measures, and 87.8% were admitted to hospital. Among the victims who had consumed other drugs, 100% did not use safety measures and needed to be admitted; 70.7% of patients intoxicated with some kind of drug were considered serious.

Conclusions: A high proportion of alcohol consumption and other drugs exists among the drivers of motor vehicles that are involved in traffic accidents, and a high disproportion exists between the recognition of such consumption and the analytical determinations. Drug consumption is related clearly to the nonuse of safety measures, having the potential to increase the severity of the injuries and the cost of medical resources.

Key words: accidents; alcohol; consumption; drivers; drugs; injuries; safety measures; traffic
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Model of Disaster Medical Response in Metropolitan Taipei

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Introduction: Disasters are tragedies that overwhelm our communities, destroy our property, and harm our population. Since 21 September 1999, we suffered from a major disaster (earthquake) that killed about 2,347 people, and injured approximately 9,400 people. Three days later, there were 320,000 people (12.8%) who were staying in shelters, because their houses (81,000) were totally or partly damaged. The affected area was suburban, and the amount of damage was limited, but the disaster medical response was very important. For further preparation, it was necessary to build a model for disaster medical response in the metropolis.

Objective: This study should explain the importance of building a model of disaster medical response in the

metropolis using the Taipei experiences. We provided the establishment of emergency medical services (EMS) system, the organization, and the multidisciplinary team response to a major disaster.

Method: We choose the city of Taipei for the study sample. Taipei has a population of 2,640,000 people, and has 12 local administration areas. The emergency medical services system (EMSS) has 24 system hospitals (6 medical centers, 14 regional, and 4 local hospitals). We divided Taipei into 5 disaster medical response areas (east, south, west, north, and middle), and the demographic data, the use of severity scores, and questionnaires from the respondent persons were collected. A cohort study design was used.

Results: The accuracy and reproducibility of these assessments depended upon the training and skill of the assessors and upon the refinement of the tools used in the conduct of these assessments. The data collected included: medical, public health, sanitation and water supplies, shelter and clothing, food, energy supplies, search and rescue, public works and engineering, environment, logistics and transport, security, communication, economy, and education. After five disaster medical response areas were compared, the best responses were found in the north and middle areas.

Conclusion: To build a model of disaster medical response in the metropolis is necessary. From the project design, we can identify our vulnerabilities. Implementation of change is directed towards mitigation of the damage that may occur from disasters.

Key words: assessment; design disaster medicine; disasters; earthquake; medical responses; model; preparedness

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Clinical Characteristic and Prevention of AMI in Middle Age and Young Patients

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Objective: For improving the diagnosis of younger patients presenting with acute myocardial infarction (AMI).

Methods: The clinical analysis was done in 125 patients with AMI who were <49 years of age with 125 middle and young age cases.

Results: The middle and young age patients were 15.1% of total AMI cases evaluated during the same period with 122 males and 3 females; the ratio was 40.7:1. In the young group, 74.6% smoked, 56.0% had hyperlipidemia, 40.8% drank, 27.2% had hypertension, and 27.2% had a family history of AMI. The mortality was 7.2% in four weeks. The male to female ratio, smoking and family history in the young group were higher than they were in the older group, whereas hypertension and mortality were lower than in older group. These differences were significant statistically.

Conclusion: The middle and young age patients mostly had risk factors, significant predisposing causes, sudden onset, and on premonition. The early sudden death rate was higher, but the late complication rate was lower. Therefore, the

course of disease was short and the prognosis was better than for the older cases.

Key words: age; clinical characteristics; diagnosis; mortality; myocardial infarction; prevention; risk factors

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Relationship Between Mortality and Building Collapsed Patterns

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Introduction: This presentation describes the relationship between injuries to persons and the collapsed patterns of buildings in the Cokaeli Earthquake in Turkey, 1999. Collapse of buildings is responsible for many victims during an earthquake, while there are some patterns of collapse that do not kill. On 17 August 1999, an earthquake with a magnitude of 7.4 on Richter scale, struck Cokaeli, Turkey. More than 16,000 people were killed.

Methods: The research team defined the collapsed RC buildings 20 types, and classified them using the 5 MSK damage grade, D0 – D5, in the view point of architect engineering. Moreover, the team subclassified the D5 damage, considered totally destroyed, into 11 precise patterns. The team visited the site—Adapazari, Turkey—and collected the data about individual collapsed buildings and the mortality of the inhabitants, using inspections and interviews.

Results: The results showed that the mortality related strongly to the type of collapse. The deaths only occurred in 5 of the 11 types of MSK-D5, a pancake-like collapse in the lower stories of the structures.

Discussion: The research team proposes discussion about the human damage and building damage under the more precise classification of complete collapse than those of ordinary MSK damage grade.

Conclusions: The survival potential of trapped victims according to the collapsed patterns, may help the decision-making for the optimal triage for search and rescue. The conclusions should be associated with improvements in the strategies used for search and rescue activities, and also the induced building-collapse type to the survival.

Key words: building collapse; earthquakes; patterns; search and rescue; survival

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