

Organization and Implementation of Medical Support after an Earthquake

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China is a very earthquake-prone country. In China, the armed forces are the major element for rescue following an earthquake. This paper introduces the organization and implementation of medical support in an earthquake. It reviews the casualties and loss of property that happened following 10 powerful earthquakes between 1966 and 1976, and it examines the practices, experiences, and lessons of the medical support provided by the armed forces. It describes the medical support preparation work of the military hospitals and other military medical units. According to the practice of the Chinese armed forces, the paper discusses the preparation in six aspects: (1) mentality, (2) organization, (3) technology, (4) regulation, (5) material, and (6) training.

Keywords: armed forces; China; disaster; earthquakes; experiences; hospitals; mentality; organization; preparedness; regulation; rescue; response; technology; training

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New Responses and Precautions Resulting From Mass Poisonings in Japan

Noriyoshi Ohashi

In the past 10 years, Japan has experienced several unusual chemical emergencies, leading the Ministry of Labor and Health to develop additional countermeasures. Sarin gas, a deadly neurotoxin, was released by terrorists in the city of Matsumoto in 1994, killing 7 people, and in the Tokyo subway in 1995, killing 12 and injuring more than 5,000. In Wakayama City in 1998, food at a summer festival was deliberately poisoned with arsenic; there were 67 victims and 4 deaths.

As a result, additional analytical instruments (HPLC, fluorescent X-ray analyzer) were provided to 50 critical care and emergency medical centers. Personal protective equipment (PPE) and tools for decontamination were arranged in every prefectural government. There are frequent seminars on dealing with nuclear, biological, and chemical (NBC) terrorism disasters. And a collaborative network has been established among prefecture governments, fire and police departments, public health centers, hospitals, poison information centers, the coast guard, and self-defense forces.

Keywords: arsenic; Japan; NBC; poisoning; sarin; terrorism; Wakayama

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Health and Hygiene Conditions in an Afghani Refugee Camp in Pakistan

Satoko Otsu

Objective: Since American military action in Afghanistan began in late 2001, a large number of Afghans have sought refuge in Pakistan. Crowded living conditions in tents, poor hygiene, and the prevailing cultural and religious background created an environment in which refugees may be highly susceptible to disease acquisition and transmission.

This study sought to describe the health status and risk factors of Afghani refugees in the northwest area in Pakistan.

Methods: Medical records from two health units in Balochistan State that served two refugee camps were analyzed for disease types and risk factors among the refugees.

Results: The refugees' most common infectious morbidities were diarrhea, respiratory infections, and skin diseases (including leishmaniasis). However, chronic diseases such as arthritis and headache were the most common outpatient diagnoses. Risk factors for diseases included illiteracy, lack of education about basic hygiene, and crowded living conditions (refugees resided with an average of 6 to 10 relatives per tent). Vaccination coverage was low.

Conclusions: Owing to poor residential conditions and lack of hygiene knowledge, Afghani refugees in northwest Pakistan were prone to infectious diseases. It is necessary to teach basic hygiene and promote vaccinations among these groups. Health units should also be prepared to manage chronic diseases.

Keywords: Afghanistan; hygiene; leishmaniasis; Pakistan; refugees

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Review of Hospitalized Ocular Trauma Patients in Rafsanjan, Iran (2001–2002)

Majid Mohammady

Objective: To identify the demographic factors related to the increased risk of ocular injuries presented to the Rafsanjan emergency department, and to determine the planning and provision of eye healthcare and safety strategies for the prevention of eye trauma.

Methods: A descriptive, cross-sectional study for 110 consecutive patients who presented to the ocular emergency department, and were hospitalized over a 24-months period. Ocular injuries and associated variables were assessed.

Results: There were a total of 110 patients, and 73.9% were men. Ages ranged between 5 years to 56 years, with the mean age of 15.6 years. Vision at presentation varied from light perception to 20/20. Fifty-three percent of the victims suffered injuries caused by blunt trauma. Common ocular findings were hyphaema (50%), corneal laceration (46%), scleral laceration (15.3%), uveal prolapse (15.3%), traumatic cataract (19.2%), and vitreoretinal injuries (23%).

Conclusions: Ocular traumas remain an important cause of avoidable and predominantly monocular morbidity. Health education on the preventive aspects of ocular injuries in schools, as well as industrial centers, should reduce the incidence of visual loss due to ocular injuries.

Keywords: blunt; education; eye; healthcare; injuries; morbidity; prevention; trauma; vision

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Epidemiology of Childhood Injury in Rafsanjan, Iran

Hamid Bakhshi

Introduction: The purpose of this study was to describe the main injury patterns and treatment outcomes for children under 10 years old who were injured in Rafsanjan and treated in hospital emergency services, along with their main demographic characteristics.

Methods: This cross-sectional study was carried out at the

Ali ebn e Abitaleb hospital in Rafsanjan, Iran. Data were collected during four months in 2000. A total of 568 children with injuries were admitted to the emergency department. Data were analyzed using SPSS software.

Results: The ages ranged from 2 months to 10 years with a mean value of 6.5 years; 63% of patients were between 5 and 10 years of age. More males were affected than females, with a ratio of 1.7: 1. Falls were the most common causal factor, responsible for 158 injuries (27.8%); 120 (66.7%) patients had fallen while on level ground while either playing or running; 55 patients (9.7%) had fallen from a high altitude. Road traffic accidents were the mechanism of injury in 137 patients (24.1%). About 86% of these were pedestrians knocked down by automobiles; vehicle passengers accounted for about 14% of the cases. Burns, mainly from scalding or dropping hot liquid, had occurred in 70 patients (12.3%). There were 18 patients (3%) with head trauma caused by a heavy object. Injuries from bites occurred in 7 patients (dog, cat, and bees). Drugs and toxin ingestion occurred in 6 patients (1.1%), and sport injuries happened in 9 children. Other rare injuries were blade and knife wounds, toys, assault, and misplaced foreign bodies, or a complex of causes (15.8%).

The most common anatomical regions affected were the head and limbs (73%); 20% had bony fractures; and 20.7% with head injury, but only 20% of these injuries were severe. The home was the most common site of injury, followed by streets or roadway and school. Death occurred in 6 patients; accounting for 1.1%; these patients had severe head injuries caused by motor vehicles.

Conclusion: The finding of this study suggest that falls and road traffic injuries are an important factor in childhood morbidity and mortality in our environment. These injuries are preventable and more parental care is advised.

Keywords: children; injuries; locations; mechanisms; morbidity; mortality; parents; prevention; road traffic accidents; trauma

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Rhabdomyolysis and Acute Renal Failure in Emergency ICU

Kazubisa Shimadzu

Introduction: The mechanisms involved in rhabdomyolysis are not fully understood.

Method: The outcomes, the cause of death, complications, and treatment methods were reviewed for 64 patients with rhabdomyolysis cases and compared with those of 242 patients with acute renal failure (ARF) in an emergency intensive care unit (ICU).

Results: The mortality rate for the patients with rhabdomyolysis was 1.6%, while that for the ARF cases was 35.5%. Only one of the patients with rhabdomyolysis died due to acute respiratory failure. The complications accompanying ARF included: intracranial hypertension, adult respiratory distress syndrome (ARDS), circulatory instability, septicaemia, and disseminated intravascular coagulopathy (DIC). While multiple organ failure appeared as a complication in many of the ARF cases, it appeared in only a few of the rhabdomyolysis cases. Due to the presence of circulatory instability, continuous methods (continuous hemodialysis, continuous hemofiltration, and continuous

hemo-diafiltration) were used in 116 of 142 ARF cases (81.7%) requiring blood purification. Of the 31 rhabdomyolysis cases requiring blood purification, 17 were treated successfully with conventional hemodialysis only. Aggressive fluid replacement during the early stage of acute renal failure accompanying rhabdomyolysis resulted in fewer cases progressing into chronic renal failure or death.

Conclusion: Rhabdomyolysis often is accompanied by renal dysfunction. However, the effects are not as severe as are those with ARF. Moreover, the rhabdomyolysis cases developed fewer and less severe complications than did those with ARF. Rhabdomyolysis now is treated in this hospital with comparative ease.

Keywords: acute renal failure; chronic renal failure; complications; fluid administration; hemodiafiltration; hemodialysis; hemofiltration; mortality; purification; rhabdomyolysis

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Web-Based and PDA-Based Chemical Hazard Query System for Chemical Incidents

Wen-Yu Yu

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 and methods of handling the hazardous materials also were collected from a review of papers. A query system using the combination of the characteristics and where the hazardous material was spilled 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: 76% of the users 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.

Keywords: chemicals; database; disaster; hazardous materials; incident; query system

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Development of an International Emergency Nursing Program in Less Developed Countries

Walter Jones

Objectives: The provision of emergency nursing (EN) is a growing need in less developed countries. Population growth, industrialization, increased motor vehicle use, traditional diseases, conflict, and increased vulnerability to events that may result in disasters create a growing need for emergency medicine care. Nurses play a key role in providing emergency care. An emergency nursing training course has been developed to build expertise in triage and primary and secondary assessment.

Methods: Emergency department nursing needs are defined by assessing the structure and resources of the emergency department and the educational background /knowledge base of nurses. Based on the findings of the needs assessment, a nursing curriculum and course is developed with an evaluation component. This course and curriculum