G-97
The Management of Disaster: A Case Report of the Tsunami Disaster in Flores in 1992

Karjadi Wirjoaimodjo, MD
Department of Anesthesiology and Reanimation, University of Airlangga School of Medicine, Dr. Soetomo Hospital, Indonesia

Because of its geographical location and nature, Indonesia is a country with a high risk of natural disasters. Indonesia is located at the meeting place of three continental plates, the Asian, Pacific, and Australian. Thus, it is prone to tectonic earthquakes and tsunamis. It also has a chain of active volcanoes; thus, it is prone to volcano eruptions. In the last few years, because of economic development and industrialization, now there is a risk for the development of man-made disasters.

Because of the high risk for disaster, there is a high priority reed for a good disaster management system. From the medical aspect, good disaster management only can succeed if it is based on a good daily Emergency Medical Service System (EMSS), because disaster management basically is an escalation of EMSS.

Disaster also is a complex problem; it causes not only medical problems, but also health, social, environmental, and economic problems. Thus, there must be good multi-disciplinary, multi-profession, and multi-sector cooperation. To ensure this cooperation, there is a need for a national policy and organizational structure for disaster management. In Indonesia, the organization is the National Coordination Organization for Disaster.

It also is important that disaster not only is managed at the time of impact, but it is anticipated in the development and implementation of a disaster preparedness program. To ensure that the preparation is adequate, periodic multi-sector disaster simulation exercises must be done.

Keywords: coordination; disaster; earthquakes; emergency medical services system (EMSS); exercises; Indonesia; man-made; management; planing; preparedness; policy; tsunami

Poster Sessions III
Wednesday, 13 May, 13:00–14:00 hours

P-8
The Spaso Technique in Reduction of Anterior Shoulder Dislocation in the Accident and Emergency Department of Kwong Wah Hospital (Hong Kong)

Dr. M.C. Yuen, FRCS (Ed); Dr. P.G. Yap, MBBS (HK); Dr. Y.T. Chan, MBBS (HK); Dr. W.K. Tung, FRCS (Ed)
Accident and Emergency Department, Kwong Wah Hospital, Hong Kong

Introduction: Anterior shoulder dislocation is the most common dislocation encountered in the Accident and Emergency Department. Spaso Miljesic first published the Spaso technique in 1998. The steps of Spaso technique are:

1) Place the patient in the supine position, and grasp the affected arm around the wrist and gently lift it vertically;
2) When the affected arm is in the vertical position, apply traction to the affected arm;
3) While maintaining vertical traction, the rotate the shoulder externally;
4) If difficulty is experienced, it may be helpful to palpate the head of humerus and gently push it to assist reduction, whilst maintaining traction with the other hand.

Purpose: To assess the effectiveness and safety of the Spaso technique used in the Accident and Emergency Department of Kwong Wah Hospital (Hong Kong).

Method: The Emergency Medicine residents have learned the Spaso technique in the classroom setting. They also have been encouraged to use this method as their first choice for the reduction of anterior shoulder dislocations. The administration of premedication is at the Emergency Medicine resident's discretion. A retrospective chart review was done. The records of patients seen from 01 July 1998 through 31 October 1998 in the Accident and Emergency Department with the diagnosis of anterior dislocated shoulder were retrieved. Those dislocated shoulders with fracture of humerus were excluded. The premedication used, success of the attempt, and any complications developed were abstracted from the record.

Results: The Emergency Medicine residents applied the Spaso technique to reduce 16 cases with anterior dislocated shoulder during the study period, including nine male and seven female patients. The overall success rate of the Spaso technique for the entire group of emergency medicine residents was 87.5%. No complications were noted.

Conclusion: The Spaso technique is useful for reducing anterior dislocations of a shoulder. This technique is simple and effective. Emergency Physicians should consider the use of this technique in the treatment of anterior shoulder dislocations.

Keywords: Accident and Emergency; dislocation of the shoulder; emergency medicine; premedication; reduction; Spaso technique

P-9
Does Unreamed Nailing Prevent Pulmonary Fat Embolism?

Keiji Tanaka, MD; Masateru Shindo, MD; Kazui Soma, MD; Mituhiro Hirata, MD; Takashi Ohwada, MD
Department of Emergency and Critical Care Medicine, Kitasato University School of Medicine, Sagamihara, Kanagawa, Japan

Purpose: The purpose of this prospective study was to evaluate pulmonary fat embolism by means of measuring the fat droplets in cells obtained by bronchoalveolar lavage (BAL), and to assess whether the use of unreamed nailing could prevent pulmonary fat embolism compared to the use of reamed nailing.

Methods: Forty-eight patients, 39 male and 9 female,

with 42 femoral and 11 tibial fractures were treated with either reamed intramedullary nailing (Group R, n = 28) or with unreamed nailing (Group NR, n = 20) within three days of their injuries. The mean value for age was 27.4 years (range, 16 to 63 years). In Group R, 28 femoral and four tibial fractures, reaming was performed up to 12.5 mm, and a 9–11 mm nail was inserted. In Group NR, 14 femur and 7 tibial fractures, a 9–10 mm nail was inserted without reaming. BAL was performed within 24 hours postoperatively with the standard procedure, in which sterile normal solution is instilled in 20 mL aliquots for a total of 100 ml, and immediately aspirated manually with a syringe. The cells contained in the lavage fluid were counted on uncentrifuged specimens by using a hemocytometer. The fluid then was centrifuged (1,500 rpm, 5 minutes), and differential cell counts were performed on a preparation that was stained with Wright-Giemsa stain. The percentage of lavage cells containing red or brown-red fat droplets (lipid-laden cells) was calculated after examination of at least 200 cells on the slides stained with Sudan III, and the findings for two groups were compared.

Results: The average age, ISS, and fracture index (FI) were 28.1 ±12.4 years, 15.2 ±9.3, and 5.4 ±2.4 in Group R; and 26.3 ±11.7 years, 14.5 ±6.4, and 4.7±3.2 in Group NR, respectively. There were no significant differences between two groups. The mean percentage of lipid-laden cells in BAL fluid was 33.6 ±25.8% (range, 2 –89%) for Group R and 36.6 ±21.3 % (range, 2–70%) in Group NR. This difference also was not significant statistically. In this study, no typical features of fat embolism syndrome were identified in any of the patients.

Discussion and Conclusion: Conventional nailing procedures involving reaming of the medullary cavity have become an established method of long bone fractures over the last few decades. In recent years, however, case reports have been published describing acute pulmonary failure during reamed nailing of long bone fractures. An alternative to conventional reamed nailing can be found in the application of nails of smaller diameter inserted without reaming. This unreamed nailing could prevent pulmonary fat embolism compare to reamed nailing. To evaluate pulmonary fat embolism during intramedullary nailing, we compared patients in a reamed intramedullary nailing group with an unreamed nailing group by means of BAL fluid analysis. Based on the results of this study, unreamed nailing may not prevent pulmonary fat embolism compare to reamed nailing of the medullary cavity.

Keywords: bronchoalveolar lavage; fat embolism; fractures; intramedullary nailing; prevention; surgery; trauma

P-10
Trauma Scoring Systems Explained

Mohammed Hassan Fani-Salek, MD; Vicken Y. Totten, MD, MS; Stephanie A. Terezakis
Academic Emergency Medicine of the Catholic Medical Center of Brooklyn and Queens, Jamaica, New York USA

It is important to understand the variety, extent and limitations of the extant Trauma Scoring Systems that are referenced in the English Language literature. Trauma scores are tools to evaluate the extent and severity of injury, facilitate inter-institutional comparisons, and facilitate trauma research. In the United States, emergency physicians direct prehospital care systems, direct trauma teams, and stabilize trauma victims for trauma surgeons. Currently, there is no concise description of extant trauma scoring systems in the Emergency Medicine (EM) literature. This poster presentation presents the three types of trauma scoring systems: 1) physiologic; 2) anatomic; and 3) combined. A hypothetical case study illustrates the use of each system.

The systems described include the:

1) Glasgow Coma Scale (GCS);
2) Pediatric Glasgow Coma Scale, (PGCS);
3) Trauma Score (TS);
4) Circulation, Respiration, Abdominal / Thoracic Motor and Speech Scale (CRAMS);
5) Acute Physiology and Chronic Health Evaluation System (APACHE);
6) Abbreviated Injury Scale (ASS);
7) Injury Severity Score (IS S);
8) Anatomic Profile (AP);
9) A Severity Characterization of Trauma (ASCOT);
10) Revised Trauma Score, (RTS);
11) Pediatric Trauma Score (PTS); and
12) Drug-Rock Injury Severity Score (DRISS).

Keywords: Emergency Medicine; scoring systems; severity scores; trauma

P-11
Development of Right Internal Carotid Artery Transection with Fatality in a Head-injured Patient: A Case Report and Literature Review

Chin-Wang Hsu; Ying-Hsin Chen; Hsaio-Dung Liu; Ming-Ying Liu
Department of Emergency Medicine, Tri-Service General Hospital, National Defense Medical Center, Taipei, Taiwan, Republic of China

Introduction: Head and neck traumas are a major challenge to Emergency Physicians in Taiwan, partial due to the large population of motorcycle drivers. But, head injury combined with internal carotid artery transection, basal skull fracture, and intracranial hemorrhage is a rare emergency occurrence, and needs rapid response and aggressive treatment.

Case Report: A 43 year-old female was brought to the Emergency Department following a motorcycle accident. Initial evaluation showed stable hemodynamics, but loss of consciousness with a Glasgow Coma Scale score of five. Nasal bleeding and bloody otorhea were the first presenting features. The computed tomographic (CT) scan of the brain demonstrated a basilar skull fracture and intracranial hemorrhage. Subsequent emergency carotid and vertebral arteriography disclosed dissection with pseudoaneurysm formation over the high cervical and