

(N37) Comparison of the Effects of Early Plavix Treatment in Emergency Departments

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Introduction: Considering the high rate of cardiovascular disease in Iran, a quick diagnosis for prescribing drugs and dosages should be adopted. A study to determine which methods are suitable for the country is needed. The early administration of Plavix to patients with heart conditions will be discussed.

Methods: Two Tehran specialty hospitals that receive a large number of cardiovascular patients (Baghiatullah and Imam Hossein Hospitals) were selected for the study. Early doses of Plavix were administered to patients with cardiovascular conditions. At Baghiatullah Hospital, the initial dose was 75 milligrams, while at Imam Hossein Hospital, the initial dose was set at 300 milligrams. The domestic product was used in both hospitals. Patients given the initial dose were provided with a constant daily dose equal to the initial dose. The number of days of hospitalization and side effects were monitored until discharge.

Results: Patients with acute coronary conditions who were taken to Baghiatullah Hospital and given a dose of 75 milligrams, were hospitalized for 48 to 72 hours, then discharged, while patients of a similar condition who were not given the shot usually were hospitalized for 96 hours before being discharged. Patients with acute coronary condition.

Keywords: acute coronary syndrome; cardiovascular disease; emergency department; emergency health; medication; Plavix

Prehosp Disast Med 2009;24(2):s51

(N38) Early Prescription of Streptokinase in Myocardial Infarction

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Introduction: Cardiovascular incidents are the most common cause of deaths in the world. Myocardial Infarction (MI) is the most life-threatening occurrence, which is mostly caused by plaque rupture or erosion with superimposed non-occlusive thrombus. Early treatment with anti-thrombotic agents plays an important role in reducing the number of deaths caused by MI. This study is designed to assess the mean time between the entrance of possible MI patients to Emam Hossein Hospital and the initiation of the treatment.

Methods: This study is an interpretive-descriptive in a form of cross sectional study. It assessed 110 patients admitted to the Eman Hossein Emergency Department. The data were obtained from checklists filled by patients' families or the emergency staff. Student's *t*-test and variant analysis were used to compare the average and results.

Results: Of the 110 cases, 31 were female and 79 were male. The mean time was 66/39 minutes; 73/74 minutes for female patients and 63/5 minutes for male patients. In addition, the mean time was 49/92 minutes in the morning shift, 69/78 minutes in the afternoon shift, and 72/68 minutes in the night shift.

Conclusions: This mean time, called "Door To Needle" time in valid scientific leagues, in the world is 30 minutes. In comparison with this study, it is two times faster, longer in female than males, and longer in the afternoon and night compared to the morning shift. Different variants such as emergency staffs, physicians, patient factors, and environmental-physical factors can cause this difference.

Keywords: cardiovascular incidents; myocardial infarction; patients; public health; treatment

Prehosp Disast Med 2009;24(2):s51

(N39) Demography of Patients Transported by Helicopter to Imam Khmeiny Hospital

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In the past century, industrialized nations underwent an epidemiologic transition. Trauma became the leading cause of years-of-potential-life-lost, and consumed large amounts of healthcare resources. In Africa and some part of Asia, trauma now is a major cause of death and disability. Since there has been significantly less research in the field of trauma than in other conditions, trauma has been termed the "neglected disease of modern society". This phrase also may apply to the status of trauma in most developing nations where a minimal amount of money is spent on published health programs and trauma research.

Since the beginning of the month of Khordad in 1379, air ambulances have been transporting severely injured patients. Because this form of transportation is costly to the government, an evaluation was performed.

The aim of this study is to determine some aspects of the epidemiology of trauma and quality of emergency services. This study will build a base for more comprehensive studies in the future.

In this study, the demographic information of patients transported to Imam Khmeiny Hospital by medicopter from the beginning of this service was analyzed.

Of the 158 cases, the male:female ratio was 2:8, and the most common patient age was 30 years. A total of 92% were injured in accidents, which demonstrates the necessity of better programs in road traffic safety. The most commonly injured site was to the extremities, followed by the head and neck. The most severe injuries were seen in patients with injuries to the head, neck, and thorax.

Most patients were treated in general surgery and orthopedics, which demonstrates the necessity of more attentions for these services. Most of patients left the hospital on their own will. This illustrates their dissatisfaction with services.

Keywords: emergency medicine; helicopter; Iran; transport; trauma

Prehosp Disast Med 2009;24(2):s51

(N40) World-Class Treatment in Chile in a Complex Case

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A 38-year-old Caucasian female airplane passenger suffered a massive pulmonary embolism due to a deep venous

thrombosis. This is despite a weight-adjusted application of low molecular weight heparin during a plane descent toward Santiago, Chile on 02 October 2007. Due to a permanent open foramen ovale, a thromboembolic clot closed the right internal carotid artery. The resuscitation began immediately at the gate and the patient was transferred to Clinica Alemana, where a cerebral computed tomography (CT) was performed within an hour. The decision was made for immediate lysis (local and systemic) with RTPA. A vena cava umbrella was inserted and the lysis began. During the lysis, the patient developed brain pressure signals. Another CT was performed and the neurosurgical team was informed. Despite the lysis treatment, the neurosurgical team decided upon a decompression craniectomy. During the surgery, the patient received transfusions. Otherwise, the procedure was successful. After 16 days on the Neuro-ICS/IMC, the patient returned to Germany's Intensive Care Unit of Lufthansa.

In May, the patient received a craniectomy with implantation of a palacos bone. In October, the patient received a closure of the patent foramen ovale with a 25 mm Starflex-Occluder. An incomplete left-sided hemiplegia remains at that time, but the patient recovered within a year. The patient began working full-time as an internal medicine doctor in a cardiology department exactly one year after the event. The etiology of the clot had been due to increased Lipoprotein (a).

Keywords: airplane passenger; Chile; emergency health; lysis; treatment

Prehosp Disast Med 2009;2(2):s51–s52

(N41) Growing Demand for Emergency Health Services in Queensland, Australia

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Introduction: The demand for emergency health services (EHS), both in the prehospital (ambulance) and hospital (emergency departments) settings, is growing rapidly in Australia. Broader health system changes have reduced available health infrastructure, particularly hospital beds, resulting in reduced access to and congestion of the EHS as demonstrated by longer waiting times and ambulance "ramping". Ambulance ramping occurring when patients have a prolonged wait on the emergency vehicle due to the unavailability of hospital beds. This presentation will outline the trends in EHS demand in Queensland compared with the rest of Australia and factors that appear to be contributing to the growth in demand.

Methods: Secondary analysis was conducted using data from publicly available sources. Data from the Queensland Ambulance Service and Queensland Health Emergency Department Information System (EDIS) also were analyzed.

Results: The demand for ambulance services and emergency departments has been increasing at 8% and 4% per year over the last decade, respectively; while accessible hospital beds have reduced by almost 10% contributing to the emergency department congestion and possibly contributing to the prehospital demand. While the increase in the proportion of the elderly population seems to explain a great deal of the demand for EHS, other factors also influence this growth including patient characteristics, institutional and societal factors, economic, EHS arrangements, and clinical factors.

Conclusions: Overcrowding of facilities that provide EHS are causing considerable community concern. This overcrowding is caused by the growing demand and reduced access. The causes of this growing demand are complex, and require further detailed analysis in order to quantify and qualify these causes in order to provide a resilient foundation of evidence for future policy direction.

Keywords: ambulance; Australia; demand; emergency health services; emergency medicine; prehospital; Queensland

Prehosp Disast Med 2009;24(2):s52

(N42) In-Flight Vital Signs Blackbox for Trauma Care

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Introduction: A prompt and adequate medical response following an injury is the predominant goal in trauma care. Advances in telemedicine technology have made it easier to record patient vital signs (VS), events, and life-saving interventions (LSI) in real-time in the hostile terrain of emergency medical services (EMS) practice. The results of vital signs blackbox (VSB) used for aero-medical transfer to a major trauma center for collecting real-time vital-signs trends, waveforms, and events are reported in this presentation.

Methods: The VSB uses a personal digital assistant (HP-iPAQ) with an embedded box (Inovamar Inc.) to capture VS from a field patient VS monitor (Propaq 206). Real-time electrocardiogram (ECG), Heart Rate, SPO₂, End-Tidal CO₂ trends and waveforms are recorded continuously on a memory card (240 hours, 2GB). Nine on-board LSI events were configured for rapid in-flight documentation.

Results: Six Medevac helicopters were equipped with the VSB systems, which have consistently captured waveforms (182 Hz) and numerical data (1 Hz) for 163 patients in a six-month period. The average duration of VS data was 25.9 minutes (±5 minutes). Patients were monitored constantly during the air transfer. Specific VS monitored during the transfer were ECG/electrocardiogram-heart rate/RR (95%), SpO₂/SPO₂-PR (87%), systolic blood pressure/mean blood pressure/dias-