(A6) Accident and Emergency Rescue Diary of a Save Accident Victims of Nigeria Student Chapter

Anthony O. Osaguona;[1] *Momodu Kassim;*[2] *Edeaghe Ehikamenor*[3]

1. University of Benin, Benin City/SAVAN, Benin City, Edo State, Nigeria
2. Save Accident Victims of Nigeria (SAVAN) Federal Polytechnic Chapter, Auchi, Edo State, Nigeria
3. SAVAN, Benin City, Edo State, Nigeria

Introduction: Preventing motor vehicle crashes and administering basic prehospital care should be a responsibility of everyone and not only of road traffic officers, emergency technicians, and healthcare personnel. The Save Accident Victims of Nigeria (SAVAN) Auchi Polytechnic chapter has taken this challenge head-on. The aim of this paper is to assess the overall activities of the students, observe shortcomings, and provide solutions where possible.
Methods: This is a retrospective study that examined the accident diary of the SAVAN Auchi Polytechnic branch between May 2004 and July 2007. Information retrieved included the date and time of the accident, location of the accident, number of persons involved, and prehospital care and other activities.
Results: Twenty-six incidents were recorded in the diary, of which, five (19.2%) cases were not trauma-related. The years 2004, 2005, 2006, and 2007 recorded two, six, six, and eight cases, respectively. Most crashes occurred in the morning, but had increased fatality in the evenings.

Only one crash was recorded to have occurred on school property. A total of 20 occurred outside the polytechnic gate and the adjoining roads. Rescue and transfer of crash victims to the hospital were the most common prehospital interventions performed. Others include traffic control and patrol.
Conclusions: Federal Polytechnic Auchi is bordered by several highways. Most of the students live around the campus, which accounts for high vehicular traffic on the roads. The SAVAN Auchi Polytechnic branch has met the challenges of caring for motor vehicle crash victims. Although poor reporting is a shortcoming, continuous training and retraining is advocated.
Keywords: accident; comptency; education; emergency; motor vehicle crash; rescue inventory; Save Accident Victims of Nigeria; student
Prehosp Disast Med 2009;24(2):s3

(A7) Assesment of Duration of Emergency Department Stay, Admission, and Transfer-Out Rates in Patients Presenting with Orthopedic Injuries in a Level-One Trauma Center

John Bera; Sanjeev Bhoi
JPN Apex Trauma Centre, All India Institute of Medical Sciences, New Delhi, India

Background: Trauma is a modern epidemic, particularly for India. This report presents the duration of emergency department stay, admission, and transfer-out rates in patients presenting with orthopedic injuries.
Methods: All patients presenting to the emergency department of the trauma center with a history of injury and who required hospitalization were recruited for the study. Data were collected between 19 May 2008 to 31 July 2008. The pediatric age group was defined as 1–15 years and geriatrics as >60 years. Bone injuries were categorized into seven categories: Category I was defined as head and face bone injury; II as spine injury; III thoracic cage injury; IV as upper limb injury; V as pelvis injury; VI as lower limb injury; and VII as dislocation.
Results: There were 480 cases analyzed, of which 388 (80.83%) were males and 92 (19.16%) were females. Ninety (18.75%) patients were between 1-15 years, 366 (76.25%) were between 16-60 years, and 24 (5%) were between 61-90 years. The age range was 1-90 years with an average age of 30.9 years. The predominant cause of injuries was due to road traffic crashes, assault, falls from a height, sports injuries, fire arm injuries, and railway accidents. There were 46 (9.5%) I injuries; 42 (8.75%) II injuries; 32 (6.66%) III injuries; 134 (27.91%) IV injuries; 20 (4.16%) V injuries; 194 (40.14%) VI injuries; and 10 (2.08%) VII injuries. A total of 7.5% of the patients had compound injuries. There were 240 (50%) patients admitted to the trauma center and the rest were transferred to other hospitals. The average duration of stay in the emergency department was 5.7 hours before disposition.
Conclusion: Young males were predominantly affected, with road traffic accidents being the primary cause of injury. Lower limb injuries were the most common. The admission rate was 50%.
Keywords: emergency health; India; orthopedics; patient admission; trauma
Prehosp Disast Med 2009;24(2):s3

(A8) Case Report: Traumatic Extensive Degloving Avulsion Injury of Total Scalp Soft Tissue Loss

Chou-Chen Chen
Taichung Veterans General Hospital, Taichung City, Taiwan

An unusual, traumatic, extensive degloving and avulsion injury of total scalp soft tissue occured in a 45-year-old female patient while she worked in a factory. The severe and complete soft tissue loss was along the junction of hair follicle and hairless skin, from a posterior aspect of the head toward an anterior aspect of head and downward to the bilateral superior part of both eyebrows. The extensive tear mechanism caused the patient great suffering and active oozing of the tissue and skull. The active bleeding vessels included bilateral superficial temporal vessels and diffuse soft tissues. They were ligated in the emergency department. Bleeding continued after the first surgical operation. The second operation used a full-thickness skin graft to reconstruct the soft tissues. The hospital stay was 14 days, but further debridement may be necessary.

The immediate resuscitation of the patient is important in order to avoid further vasculature damage. The availabil-

ity of experienced plastic surgeons is another important factor for patient prognosis.

Keywords: avulsion injury; emergency health; scalp; soft tissue loss; work injury
Prehosp Disast Med 2009;24(2):s3–s4

(A9) Case Report: Pneumomediastinum Due to Sympathomimetic Substance Abuse

Nader Tavakoli; Maryam Mehrazi; Ali Shahrami
Tehran, Iran

Introduction: Pneumomediastinum is caused by air entering into the mediastinum. Spontaneous pneumomediastinum is reported following sympathomimetic or hallucinogen substance abuse. This is a case report of pneumomediastinum following sympathomimetic substance abuse.

Case Report: A 25-year-old man came to the emergency department with chief complaints of chest pain and shortness of breath beginning night prior to admission. The pain was pleuretic and associated with palpitations, but was without nausea or vomiting. The patient denied any substance abuse at first. There was no past medical and family history of cardiac diseases. During physical examination, he was agitated and afebrile, but not in respiratory distress. The only abnormal finding was a mediastinal crunch. Cardiac enzyme assay and electrocardiogram were normal, except for mild sinus tachycardia. There was evidence of pneumomediastinum on the chest radiograph that was confirmed by the chest CT scan. The serum amylase and barium meal were normal. The patient confessed to sympathomimetic substance (crystal) abuse the night prior to admission. The patient was under observation and was admitted for 24 hours, then was discharged. There were no complications in a follow-up visit.

Conclusions: Pneumomediastinum caused by amphetamines, ecstasy, methamphetamines, and/or crystal has been previously reported in the literature. The probable mechanism initially is alveolar tearing causing pulmonary interstitial emphysema. This tearing can be due to various mechanisms causing transmural pressure differences. The valsalva maneuver to increase the euphoric feeling and high levels of physical activity also increases the alveolar pressure. As a result, air entering the pulmonary interstitial space passes to the mediastinum through leakage via bronchovascular layers. Treatment is supportive.

Keywords: alveolar tearing; crystal; pneumomediastinum; substance abuse; sympathomimetic
Prehosp Disast Med 2009;24(2):s4

Keynote 3

Consequences of Economic Crises

Dr. Andy Robertson
State Health Coordinator and Director, Disaster Management, Western Australian Department of Health, Australia

In October 2008, the world realized the credit crisis that had flowed from the United States sub-prime housing crisis was not another financial correction or market fluctuation, but the harbinger of the greatest international recession since the 1930s. International governments are pouring trillions of dollars into their markets, banks, and economies to free up credit and bolster their financial situation, much of it too little or too late to prevent the resultant recession, collapse of companies, and increasing unemployment.

Given the experience of previous economic crises, health services, particularly in developing countries, are likely to be the first impacted. As global trade declines and overseas development assistance falls, millions more will be pushed into poverty. This will exacerbate the current worsening humanitarian situation, produced by double digit food inflation, and increased fuel prices in many developing countries, which, in 2008, already has increased the number of malnourished people by 44 million people. This situation will place increasing pressures on currently under-resourced health services that are likely to deteriorate further.

The effects on disaster health and disaster response are manifold. Investments in disaster medical capabilities will continue to fall in both developed and developing countries, as general health budgets tighten and priorities are refocused on perceived core operational services. This may flow into an increasing reluctance of developed countries to provide disaster and humanitarian assistance outside a their borders, and become increasingly focused on domestic issues.

However, disasters are not going to decrease in frequency or size. The impact and number of natural disasters continues to rise and technological disasters also may increase in frequency, particularly if industry's focus on safety is adversely impacted by the financial downturn. Terrorism also is unlikely to decrease, and may become more prevalent as collapsing economies may contribute to further extremism, and potential target countries may fail to maintain or increase their security efforts.

The possibility of social unrest also may contribute to the worsening situations. Riots already have occurred in a number of countries as companies collapse and people lose their jobs. As the situation worsens and governments look for solutions, conflicts and crises within and between countries may erupt. The lessons learned from the rise of various dictators after the Great Depression and the resultant Second World War should not be forgotten.

This presentation will undertake a detailed look at the consequences of economic crises. The consequences are not necessarily all bad, as opportunities may be created or arise that will allow health services and disaster health capabilities to be enhanced further and become better integrated and more flexible at a national and international level. With good planning and enhanced relationships, disaster health response may not be a major loser in this economic crisis.

Prehosp Disast Med 2009;24(2):s4