

medical counter-terrorism response for future terrorist attacks. These attacks have affected the lives of the common person in Mumbai, in terms of increased security checks, alerts, and fear of further attacks. These are areas of further research.

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(A213) Review of the Mass Casualty Incident after a Bomb Explosion in a Crowded Restaurant

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Terror struck Pune on 13 Feb. 2010 as a powerful bomb ripped apart a popular restaurant, killing nine people and injuring more than 45. A retrospective analysis of the injury patterns was done.

Materials and Methods: The CDC template, viz. “Bomb Surveillance Form” was used for the data collection, that was analyzed by SPSS version 15 software.

Results: Of the 50 survivors transferred to the four nearby hospitals, 11 (22%) of them had severe life threatening injuries, with 19 patients (38%) having primary blast injuries, Secondary type of injury was seen in, and 22% had tertiary injuries. Orthopedic (24%) and burn injuries (36%) were prominent. The mortality rate was 16%.

Discussion: The occurrence of MCI in an unexpected scenario overwhelms the medical resources and challenges the emergency medical facilities. Analysis of the injuries revealed that fatal outcome was related to presence of shock, severe lung, bowel injury, presence of more than four types of injury and greater than 50% burns.

Strengths: Highlights the importance of being able to recognize the blast injury patterns and their management.

Limitations: Inability to compare with other blast injuries due to several missing data.

Conclusion: Blast injury sustained in a small, enclosed space is one of the most serious and complicated forms of multiple trauma. Hospitals and civic authorities must be prepared to counter this menace of modern times. Not everything that is faced can be changed, but nothing can be changed until it is faced.

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(A214) Road War: A 200-Vehicle Crash, Special Report

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The last thing the world needs is another war.¹ Everyday about 3000 people die and 30,000 people are seriously injured on the world's roads.² Furthermore, for people who survive the crash, additional suffering and frustration occur because of administrative, legal, and social barriers.³ Since transport to hospital usually takes 30–45 minutes, the ‘golden hour’ in which 48% of deaths occur is spent mainly in the prehospital environment.⁴ On March 11, 2008 at 7:30 AM a very foggy morning, a major

car crash occurred on the high way from Abu Dhabi to Dubai. Initial scene response was conducted by Abu Dhabi traffic police Abu Dhabi Police Ambulance and Rescue Sections helped by Dubai. Casualties were transported to 2 hospitals in Abu Dhabi; Al Mafraq and Al Rahba. The Authors describes Al Rahba hospital response that received 159 casualties (almost half of the casualties).

Results: Three victims died immediately on scene. Most of the casualties were triaged and re triaged as Priority 3 (green), suffered from extremity trauma, were treated and discharged. Twenty patients were triaged as Priority 2 (yellow) and were admitted to the hospital, Three patients were priority one (red) were admitted to the ICU, one of them died 10 days later due to severe head and chest injuries.

References: 1. Roberts I, Mohan D, Abbasi K. War on the roads. *BMJ* 2002;324: 1107-8 . 2. Murray CJL, Lopez AD. Global health statistics: a compendium of incidence, prevalence and mortality estimates for over 200 conditions. Boston: Harvard University Press, 1996. 3. Haegi M. A new deal for road crash victims. *BMJ* 2002;324: 1110 . 4. Coats TJ, Davies G. Prehospital care for road traffic casualties. *BMJ* 2002;324: 1135-8 *Head of Emergency Department, Al Rahba Hospital, Abu Dhabi, UAE

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(A215) Delayed Diagnosis of Injury in Survivors of the February 2009 Crash of Flight TK 1951

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Introduction: In 2009, a Boeing 737 crashed near Amsterdam, traumatically injuring 126 people. In trauma patients, some injuries initially escape detection. The aim of this study is to evaluate the incidence of Delayed Diagnosis of Injury (DDI) and the effects of tertiary survey on the victims of a plane crash.

Methods: Data collected included documentations of DDI, tertiary surveys, Injury Severity Scale (ISS) score, Glasgow Coma Scale score, number and type of injuries, and emergency intervention. Clinically significant injuries were separated from non-clinically significant injuries. Comparison was made to a crash in the UK (1989), before advanced trauma life support became practiced widely.

Results: All 126 victims were evaluated in a hospital emergency department; 66 were admitted with a total of 171 clinically significant injuries. Twelve clinically significant DDIs were found in eight patients (12%). In 65%, a tertiary survey was documented. The DDI incidences differed for several risk factors. Eighty-one survivors of the UK crash had a total of 332 injuries. Of those with > 5 injuries, 5% had a DDI, versus 8% of those with ≤ 5 injuries.

Conclusions: The DDI incidence in this study was 7% of the injuries in 12% of the population. A tertiary survey was documented in 65%; ideally this should be 100%. In this study, a high ISS score, head injury, > 5 injuries, and emergency intervention

were associated with DDI. The DDI incidence in the current study was lower than in the UK crash.

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(A216) Ashmore Reef Boat Explosion: A Nightmare Scenario that Became a Reality

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At approximately 06:15h on 16 April 2009, there was an explosion and subsequent fire onboard the Suspected Illegal Entry Vessel (SIEV) 36. The vessel was located in the vicinity of the Ashmore Reef, approximately 610 kilometers north of Broome in Western Australia (WA). Onboard were members of the Royal Australian Navy (RAN), 47 asylum seekers, and two crew members. Traveling with SIEV 36 were the RAN Patrol Boats, HMAS Childers, and HMAS Albany. The explosion resulted in five deaths and a large number of casualties with severe burn injuries, and a smaller number with concurrent trauma injuries. The Ashmore Reef incident was unique in that it involved the medical management and evacuation of 44 injured foreign nationals (31 seriously injured) in an extremely remote location. It resulted in an unprecedented health response from multiple agencies including local, regional, and state governments, commonwealth government agencies, non-government organizations, and private industry. The mission objective for this incident was to retrieve and evacuate multiple seriously injured casualties and stabilize them for safe transport to definitive care. The mission objective was achieved for the Ashmore Reef incident with no further deaths. As with all disasters, many lessons have been learned, and recommendations have been formulated. The logistic requirements to successfully complete such a mission have been reinforced as a result of this incident, as this was the most logistically challenging mass-casualty incident in WA history.

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(A217) Success Indicators of Emergency Medical Management: A Building Collapse Disaster

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A four-story building collapse in east Delhi, India in November 2010 claimed 66 lives and left 130 injured. It is considered one of the worst such disasters in Delhi. This disaster included massive rescue operations to pull out those trapped under the debris. The nodal hospital, which did not have a well-defined hospital disaster management plan, managed the disaster extremely well. The success indicators included a SMART triage, autopsy and tagging/labeling dead bodies, public notification system, effective hospital networking for patient transfer and getting injured family members together, excellent media management, important dignitaries' management, important decision-making processes, and commendable teamwork. The critical aspects of management proved as a key indicator for the successful management.

The paper discusses the details of the case study and analyzes each indicator in greater focus. The lessons learned are critically evaluated.

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(A219) Development of a Hospital Disaster Plan for Countries with Limited Resources

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The Chris Hani Baragwanath Hospital (CHBH) in South Africa is the largest in the world, with 2,900 beds. Its trauma unit boasts 15 resuscitation bays, while the triage area has space for 40 stretchers. There are 5,000 trauma resuscitations performed yearly, out of 50,000 patients seen in the Trauma Emergency Department. There is an eight-bed Trauma Intensive Care Unit (ICU) and a 56-bed Trauma Ward. There also are 25 stepdown beds, 70 outlying beds, a six-bed Burn ICU, 20-bed ward, and a 24-bed shortstay ward. There are about 80 resuscitations and 70 trauma emergency operations weekly. However, the hospital is severely limited in financial and human resources, with only 2–3 interns, two registrars, and one trauma consultant on-call. The hospital is at > 130% bed occupancy. The CHBH was designated as the main disaster hospital for the 2010 FIFA World Cup, due to its proximity to the 96,000-seat Soccer City. Nominal disaster plans existed, but there were no resources, preparations, or knowledge, as was the case with most other government hospitals. The Trauma Directorate developed a new plan for the World Cup, future mass-casualty incidents at CHBH, and for other resource limited hospitals. The plans are centered on four critical issues: (1) preparedness of hospital structure and staff; (2) dissemination of the plan; (3) disaster training; and (4) the development of "Disaster Bags" for 350 casualties. A free disaster course trained > 400 staff members on in-hospital triage and trauma management. All hospital staff were allocated specific functions in case of disasters. This is the first time the CHBH has had an integrated disaster plan, with separate equipment allocation, through private funding, and involving all disciplines.

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(A221) Medical Preparedness for Expo 2010 Shanghai China

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Objective: EXPO 2010 Shanghai China attracted about 246 nations and international organizations as well as 73 million visitors from home and abroad. To provide good medical services to is a challenge.

Methods: Eight Level A hospitals are designated as EXPO Hospitals to provide advanced medical services to those who need critical care. There are five first aid stations in the EXPO park to provide first aid to EXPO visitors and staff. First aid at scene and emergency response are the emphasis. Practical, realistic, and systematic and forewarning emergency plans are made. An agile and efficient structure is organized. All EXPO