(138) Serial Ultrasonography for Trauma—Its Potential during Mass-Casualty Incidents

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Background: Focused Abdominal Sonography for Trauma (FAST) is an established modality of investigation to detect hemo-peritoneum in hemodynamically unstable patients. In Singapore, FAST largely has replaced diagnostic peritoneal lavage as the modality of choice in such patients. Patients who have blunt abdominal injury and are haemodynamically stable are subjected to computerized tomography (CT) of the abdomen and pelvis to rule out significant injuries. However, this is time consuming, expensive, invasive, and has limited application during mass-casualty incidents.
Objective: To establish the potential role of emergent ultrasonography (US) in haemodynamically stable patients with blunt abdominal injury presenting to the emergency department.
Methods: Two case reports demonstrating the usefulness of serial emergent ultrasonography on patients with blunt abdominal injuries are presented. One report was a multi-casualty incident with three critically injured patients. One required emergent laparotomy following demonstration of increasing hemoperitoneum on serial US examination.
Results: Both case reports demonstrate patients with initial negative studies, followed by serial ultrasonographic and CT documentation of increased bleeding into the peritoneum, requiring laparotomy. The second case report showed that use of serial US on all three patients during a mass-casualty incident can help clinicians assess the need for laparotomy without the need for using CT. Serial US pictures will be used to illustrate all the cases.
Conclusion: This report highlights the potential use of serial US in identifying haemodynamically stable patients who may require emergent laparotomy later and its application during mass-casualty incidents.
Keywords: abdominal trauma; computerized tomography; Focused Abdominal Sonography for Trauma (FAST); mass-casualty incident; serial ultrasonography
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Oral Presentations—Theme 9: Miscellaneous

Chair: Shinichi Nayayama

Session 1

Chairs: TBA

From Disaster to Journal Publication: Where is Disaster Literature being Published, and What is the Time Lag?

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As recorded early in history, disasters originally were attributed to the wrath of God and focused predominantly on hazard rather than outcome. Recently, there has been a shift in focus from hazard to outcome, and a recognition of the importance of preparedness, and response. In addition, the range of disasters is growing, and now includes terrorism, bioterrorism, and the threat of emerging new infectious diseases. As disasters continue to increase in frequency, affecting billions of people worldwide, the demand for an evidence-based approach to disaster preparedness and response has never been greater. A prerequisite to adopting any evidence-based approach in healthcare is the need to assemble a body of evidence derived from the results of relevant studies. This study was designed to identify the current evidence-base for disaster medicine. What has been found? Where has it been published? What was the time-lag between the disaster and publication of related information? Searching the electronically indexed databases MEDLINE and CINAHL, the authors searched for peer-reviewed publications following seven "disasters": (1) Chernobyl; (2) the 1993 World Trade Center bombing; (3) the 2001 World Trade Center bombing; (4) the 2002 Bali Bombings; (5) the SARS outbreak of 2003; (6) the 2004 Tsunami; and (7) the 2005 London Bombings. This paper will report on the findings of this literature search, including the number of peer-reviewed publications following each of these disasters, the journals of publication, and the time-lag between the disaster and publication of related information. This information will be important for identifying the current evidence-base for disaster medicine, specifically, what is being learned from each new disaster?
Keywords: disaster; literature; peer review; publication
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The Leaping Tag: Smooth and Safe Collection with Automated Classification of Triage Results During a Major Disaster

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In a major disaster, it may become necessary to establish many triage points. Therefore, it is important that patient medical records and triage data be arranged in a manner that allow them to be easily integrated from multiple points. The development of a triage system with the use of information tags and tags is presented below.

The patient's medical data, written on the tag, are transmitted simultaneously by radio (using Bluetooth, mobile phones, and/or e-mail) to the main computer system at the emergency headquarters. All the described and transmitted data are automatically classified. This system is called "leaping/flying triage tag".

After repeated testing under mock disaster conditions for one year, this system was put to actual use after the flood and landslide disaster in Okaya, Japan in July 2006. Merits of the system include the immediate and accurate collection/management of essential patient data regardless of the number of patients, or the diversity and severity of the conditions. In addition, in the event of contamination during a nuclear, biological, and chemical hazard (NBC),