Rhabdomyolysis and Acute Renal Failure in Emergency ICU
Kazubisa Shimadzu

Introduction: The mechanisms involved in rhabdomyolysis are not fully understood.

Method: The outcomes, the cause of death, complications, and treatment methods were reviewed for 64 patients with rhabdomyolysis cases and compared with those of 242 patients with acute renal failure (ARF) in an emergency intensive care unit (ICU).

Results: The mortality rate for the patients with rhabdomyolysis was 1.6%, while that for the ARF cases was 35.5%. Only one of the patients with rhabdomyolysis died due to acute respiratory failure. The complications accompanying ARF included: intracranial hypertension, adult respiratory distress syndrome (ARDS), circulatory instability, septicemia, and disseminated intravascular coagulopathy (DIC). While multiple organ failure appeared as a complication in many of the ARF cases, it appeared only in a few of the rhabdomyolysis cases. Due to the presence of circulatory instability, continuous methods (continuous hemodialysis, continuous hemofiltration, and continuous hemo-diafiltration) were used in 116 of 142 ARF cases (81.7%) requiring blood purification. Of the 31 rhabdomyolysis cases requiring blood purification, 17 were treated successfully with conventional hemodialysis only. Aggressive fluid replacement during the early stage of acute renal failure accompanying rhabdomyolysis resulted in fewer cases progressing into chronic renal failure or death.

Conclusion: Rhabdomyolysis often is accompanied by renal dysfunction. However, the effects are not as severe as those with ARF. Moreover, the rhabdomyolysis cases developed fewer and less severe complications than did those with ARF. Rhabdomyolysis now is treated in this hospital with comparative ease.

Keywords: acute renal failure; chronic renal failure; complications; fluid administration; hemo-diafiltration; hemodialysis; hemofiltration; mortality; purification; rhabdomyolysis.


Web-Based and PDA-Based Chemical Hazard Query System for Chemical Incidents
Wen-Yu Yu

Introduction: The aim of this study is to provide a quick query system for hazardous material of fixed facilities during a hazmat incident. The hazardous materials of fixed facilities in Taichung city were investigated.

Method: The characteristics and methods of handling the hazardous materials also were collected from a review of papers. A query system using the combination of the characteristics and where the hazardous material was spilled was built to decrease the numbers of possible hazardous materials. This database system was built up in either PDA-based or web-based system. The system has been tested during a disaster rehearsal.

Results: 76% of the users agreed that it is useful for enhancing the identification of hazardous materials.

Conclusion: To make the system more efficient, integrations of the database about hazardous materials in various government authorities must ensue.

Keywords: chemicals; database; disaster; hazardous materials; incident; query system


Development of an International Emergency Nursing Program in Less Developed Countries
Walter Jones

Objectives: The provision of emergency nursing (EN) is a growing need in less developed countries. Population growth, industrialization, increased motor vehicle use, traditional diseases, conflict, and increased vulnerability to events that may result in disasters create a growing need for emergency medicine care. Nurses play a key role in providing emergency care. An emergency nursing training course has been developed to build expertise in triage and primary and secondary assessment.

Methods: Emergency department nursing needs are defined by assessing the structure and resources of the emergency department and the educational background/knowledge base of nurses. Based on the findings of the needs assessment, a nursing curriculum and course is developed with an evaluation component. This course and curriculum
then are implemented using a train-the-trainers program. Once trained nursing leaders are prepared, they in turn will instruct student nurses in emergency department nursing.

**Results:** This process has been put in effect in Gaza and the West Bank area of Israel. Training 24 trainers is under way, and these instructors will train 300 student nurses by 03 September. These nurses will be knowledgeable in the management of acute interventions in patients in the emergency department, using advanced triage methods, skills, and prioritization of patients' acuity with primary and secondary nursing assessment.

**Conclusion:** There is a rapidly growing need for trained nurses in emergency and disaster nursing internationally. Developing emergency nursing programs based on requirements determined by the needs of individual countries not works towards betterment of the healthcare delivery of that country. It should also help lower the overall mortality rate.

**Keywords:** assessment; courses; emergency; healthcare; need; nurses; nursing; train-the-trainer; training

*Prehosp Disast Med* 2002;17(s2):s89-90.