reports for submission to MOHCC is discussed.
Keywords: casualties; disaster; hospital; information; information technology; management
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Disaster Management of SQ 006 Crash in Chang Gung Linkou Medical Center

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Background: Typhoon Xangsane whirled closer to Taiwan on 31 October 2000, prompting officials to set up disaster relief centers, cancel flights, call-off classes, and raise land and sea warnings. At 23:18 hours, a Boeing 747-400 of Singapore Airline crashed and erupted into flames at Chiang Kai-shek (CKS) International Airport. Flight SQ-006, carrying 159 passengers and 20 crew members, was bound for Los Angeles. Seventy-nine were dead at the scene, and 100 people were evacuated; 16 of them were unhurt, and 84 were injured.
Methods: A retrospective study was conducted in the Linkou Medical Center of Chang Gung Memorial Hospital, which is the primary hospital responsible for CKS International Airport. The records of disaster and charts of the admitted casualties from SQ-006 crash were reviewed.
Results: The disaster plan was declared at 23:50 hours, and ended at 02:00 hours of 01 November 2001. In total, 36 patients were treated at Linkou Medical Center of Chang Gung Memorial Hospital. Thirty-four were transferred from the scene immediately, and the other two were transferred secondarily from other hospitals. Twenty-six were male, and 10 were female; thirty-four were adult, and two were boys. The age ranged from 6 to 66 years.

After prompt evaluation, stabilization and management, 14 patients mainly associated with truncal contusion or minor lacerations of the extremities, were discharged from ED. Twenty-two patients were admitted, and one patient with burns on 100% of their body died shortly after admission. An Injury Severity Score >15 was found in nine patients. Nineteen of the admitted patients suffered variable degrees of flame burn or inhalation injury. Three patients (14%) suffered from blunt abdominal trauma and required emergent celiotomy. Four patients (18%) suffered orthopedic injuries, two with extremity open fractures, and another with lumbar spine bursting fracture, and the other with odontoid fracture and C5-C6 subluxation. Eight patients required emergent or urgent surgical interventions.

The last patient was discharged on 15 February 2001; 19 patients were discharged smoothly and 3 died from sepsis and multiple organ failure. Seven patients were transferred to their home country during hospitalization, four were sent to the States; 2 were sent to Singapore; one was sent to New Zealand. The overall mortality rate was 8% (3/36), and mortality rate of admission patients was 14% (3/22).
Conclusions: The prompt disaster response and coordinated management of this catastrophic crash, which occurred at midnight in terrible weather, was attributed mainly to a comprehensive disaster plan, repeated drills, and the location of a nearby hospital dormitory. This crash upon take-off resulted in more than half of patients with severe burns, and some of them, combined with other major injuries, mandated emergency operations. To ensure timely and optimal care of the multiple injuries after an airplane crash, the primary hospital for all international airports not only need a disaster plan and repeated disaster drills, but also should be a level-one trauma center that includes a burn unit.
Keywords: airplane crash; burns; casualties; disaster management; trauma; Typhoon Xangsane
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2.10. Resuscitation

Update in Resuscitation

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There has been a number of significant changes in the teaching of basic cardiac life support guidelines including new recommendations for bystander cardiopulmonary resuscitation (CPR), teaching, instruction for the use of automated external defibrillators (AEDs) to the lay public, and use of smaller tidal volumes with assisted breathing devices.

Likewise advanced cardiac life support guidelines have changed in accordance to the best available clinical evidence. These include downgrading of lidocaine and high dose epinephrine with greater emphasis on the use of drugs like amiodarone, vasopressin, and procainamide.

New airway devices also are advocated under these new resuscitation guidelines. Conventional teaching on Sellick's manouvre also has come into question recently, as it may increase occlusion of the airway.

There also is an increasing role for the use of new modalities in resuscitation especially low energy, biphasic defibrillation for malignant arrhythmia with better success rates while minimising myocardial damage.
Keywords: amiodarone; automated external defibrillators; cardiopulmonary resuscitation; procainamide; Sellick's manoevre; vasopressin
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Update in Paediatrics Resuscitation

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The changes in the new international guidelines for paediatric resuscitation mainly consist of modification in the

ease of teaching CPR rather than actual evidence-based treatment priorities. Although there are definite differences in the techniques and interventions for paediatric CPR, the adoption of some of these techniques is based mainly on adult studies.

In the teaching of basic CPR, studies have shown that it is difficult for laypeople to recognise an absent pulse or detect presence of pulse. Hence, as in adult CPR, the circulation check now involves teaching laypeople to recognise signs of circulation rather than for the presence of pulse. Again, because of the ease of teaching, chest compressions are taught as a techniques to remove foreign body in an obstructed airway.

In advanced paediatric CPR, most changes follow those of the adults. One of the notable changes is the use of amiodarone in the treatment of arrhythmias. Studies in children are limited mainly to its use in postoperative cardiac arrhythmias. But, amiodarone can affect sterility in growing boys, and a lethal complication described as the "gasping syndrome" have been described in neonates.

In the resuscitation of the newly born, recommendations to the start of chest compressions and administration of intravenous adrenaline have been simplified for easier teaching.

Teaching CPR in children continues to emphasize the need to pay attention to airway and breathing.

Keywords: amiodarone; cardiopulmonary resuscitation; circulation; CPR; gasping syndrome; pediatric; resuscitation

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2.11. Information Technology: The Way of the Future

Information Technology and Emergency Medicine: Present and Future

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The two elements that make information technology (IT) attractive, with regard to data, are speed and storage. Traditionally, the emergency department is the logical place for the treatment of acute illness and injuries. However, with the increasing awareness of the health care status of the individual, the demand and expectations from the public have increased tremendously in the past few years. Emergency departments face a constant increase in workload and episodic increase in attendance. Various methods have been used to cope with the additional workload. Information technology is an enabling tool to improve the efficiency of the emergency operating system.

Currently, the application of IT in emergency medicine usually starts with administrative and managerial systems. Clinical applications were developed on top of these administrative systems and infrastructures. Currently, many emergency departments in the world already have begun to capture patients' data into an electronic medical record in digital format. These clinical data include the diagnosis coding, medications, and discharge summary. Supportive clinical information also are available, such as the laboratory, diagnostic imaging, and electrocardiogram reports. Images could be retrieved in computer workstations through the use of Picture Archive Communication System (PACS) technology.

In the near future, expert systems commonly will be employed on top of the clinical information systems so as to enhance the decision support for emergency physicians. Global sharing of clinical data will be the future trend. Development of e-business for electronic transactions and interactions between health care providers will become the primary driving for e-medicine. The improvement in international broadband networks such as Gigabit Switch Router (GSR), Asynchronous Transfer Mode (ATM), and the Internet 2 technology will enhance the data transmission speed. Wireless workstations using the wireless Local Area Network (LAN) in IEEE 802.11b standard and Bluetooth technology will be the coming trend. Mobile phones using 3G technology will be very helpful in prehospital care and disaster field management.

Keywords: data; data storage; emergency department; information technology

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Medical History in an Emergency: Tapping Information Technology

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LifeMedic is an on-line personal medical history record system developed to help reduce the number of preventable medical errors made every year due to inadequate patient information. Using this system, doctors can retrieve important patient history in LifeMedic using the internet, telecommunication (facsimile and WAP-enable handphone), and wireless communications (personal digital assistant devices) technologies. LifeMedic allows timely access to information on critical illnesses, past surgery, current medications, and allergies to facilitate quick and accurate diagnosis, and help doctors optimise treatment of patients in an emergency.

LifeMedic is developed for simple and quick access in an emergency. For the non-medical community users, LifeMedic's webpages are designed to be user-friendly, easy to understand, and simple to navigate. LifeMedic is multilingual for worldwide use.

LifeMedic provides a 24-hour emergency medical and travel advisory services to its members when they are overseas. LifeMedic also promotes healthy lifestyles and fitness for disease prevention and personal well-being amongst its members through online and offline health education programmes.