

ity; (3) tongue edema; and (4) during chest compression. Intubation was performed consecutively in all scenarios with the two devices. The time required for all of the procedures, the intubation success rate, and the incidence of adverse events were recorded.

Results: The time to tube passing through the vocal cord was shorter with the AWS than the MAL in almost all of the scenarios. The success rate in tongue edema setting was higher with the AWS than the MAL. The adverse events occurred more often with the use of the MAL than with the AWS.

Conclusions: The AWS is easy to use and safe, and should be considered as a useful device in the prehospital settings.

Keywords: Airway Scope®; difficult airway; emergency health; intubation; prehospital

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(N54) Awareness of Overseas Disaster Relief Activities among Undergraduate Emergency Medical Technician Candidates

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Students in the paramedic course were giving questionnaires regarding their motivation and necessary skills for international disaster relief. Additionally, participating in the training course provided by non-governmental organizations confirms necessary skills in international disaster relief.

All 77 students in the paramedic course answered the questionnaires. A total of 92% students were interested in international disasters. The skills they thought were most necessary for such an activity were surgical knowledge (22%) and communication (18%). A total of 46% students intended to participate in the activity in the future, while 36% students answered that they would participate "with conditions". They felt most anxious about communication (38%) and sanitary conditions (27%). They thought the most important roles for paramedics were first-aid treatment (41%) and triage (15%).

In general, students have relatively high motivation and interest for international disaster relief, but they still do not have enough skills and knowledge for it. It is important for students to participate in this type of training course to gain knowledge and skills for international disaster relief and emergency medical service.

Keywords: education; emergency medical technician; disaster relief; international; training; undergraduate students

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(N55) Incidence of Chest Tube Malposition in Emergency Patients

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Introduction: Malposition of chest tubes (CT) is considered a rare complication in emergency patients. In Germany, physicians in the field perform the procedure. However, its incidence remains uncertain. The aim of this study was to assess the true incidence of CT malposition in

emergency patients. In addition, a possible coincidence of endotracheal tube (ETT) malposition and CT malposition was investigated.

Methods: A five-year retrospective study was conducted using records of 1,081 patients admitted to the emergency room at a University Hospital. Within 30 minutes of admission, a chest radiograph or whole body computed tomography was performed routinely, and used to identify the CT and ETT position. The chi-square test was used for statistical analysis.

Results: Eighty-eight CTs were percutaneously inserted in 67 of 1,081 patients, 49 (57%) CTs were placed in Monaldi (MCL), and 37 (43%) in Buelau (MAL) position. A total of 19 (22.1%) malpositions were identified, 13 in Monaldi and six in Buelau position. No statistical difference of malposition could be found between the two positions. Detailed data on endotracheal intubation (ETI) was available in 435 patients, 346 (79.5%) with correct ETI and 89 (20.5%) with incorrect ETI. With the CT in place, 56 (84.8%) patients were intubated correctly and 10 (15.2%) incorrectly. Without CT, 290 (78.1%) were intubated correctly and 79 (21.4%) incorrectly. No statistical difference of correct or incorrect ETI could be found, depending on CT malposition.

Conclusions: Malposition of percutaneously inserted chest tubes occurred in 22.1% of cases and is independent from the position of insertion or endotracheal intubation in emergency patients.

Keywords: chest tube; endotracheal tube; intubation

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(N56) Functional Decline of Elderly Patients with Acute Illnesses Requiring Emergency Admission

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Background: Advancing age and co-morbid illnesses result in a loss of ability to perform activities for daily living (ADL). These factors are important determinants of loss of independence and autonomy among the elderly. Acute illness reduces the functional status of previously healthy, community dwelling, elderly persons. However, the decline of function following an acute illness has not been quantified. The aim of the current study was to determine the change in ADL due to acute destabilization in the elderly one month following discharge.

Methods: Elderly subjects transported by emergency medical services and admitted to general medical wards of the All India Institute of Medical Sciences in New Delhi between August and December 2008 were included. The Barthel index of ADL was assessed in a longitudinal design at the time of admission and one-month post discharge. The values of the indices were compared using a paired samples *t*-test.

Results: Of the 68 subjects who were treated by emergency geriatric services at the hospital, 11 were excluded due to incomplete records, inability to follow-up, incorrect telephone numbers, or they were dead-on-arrival. Advancing age did not show significant correlation with pre-morbid

ADL score ($r = -0.040$; $p = 0.749$) or post-morbidity ADL score ($r = -0.65$; $p = 0.636$). A 45% decline in ADL score was noted one month following discharge (pre-ADL = 15.85; post-ADL = 8.78).

Conclusions: Elderly subjects are at higher risk of poor functional outcome because they are less likely to recover function lost before admission and more likely to develop new functional deficits during hospitalization and after discharge. For older adults discharged after being hospitalized due to a medical illness, prognosis for functional recovery is poor at one month.

Keywords: ability to perform activities; acute illness; daily activity; decline in function; emergency health; geriatrics; hospital
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(N57) Tool for Control over Emergency Medical Dispatch during a Major Incident

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Introduction: In Sweden, all emergency medical dispatch (EMD) is conducted by contracted EMD-companies. The County Council in the Gothenburg area wanted effective tools to monitor and control the dispatch situation during a major incident.

Methods: The unusual procurement form of the “negotiated purchase” was used in which competing companies develop the specifications together with the client, and finally the bidder with the best quality and lowest price was chosen.

Results: The purchase procedure gave the county council high-tech, computerized monitoring tools where the capacity and the ambulance units’ load and positions, can be monitored in real-time.

Conclusions: Even though the County Council lacked the technical knowledge required to do so independently, it is possible for competing, high-skilled companies to develop a major incident management tool. The county council in the Gothenburg area now has its own central EMD, fully equipped with the necessary tools to cope with a major incident.

Keywords: ambulance services; company; disaster; emergency medical dispatch; emergency medical services; monitor; tools
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(N58) Out-of-Hospital Cardiac Arrest in Train Stations and Trains: The Need for Public Access Defibrillation

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Introduction: The occurrence of witnessed out-of-hospital cardiac arrests (OHCA) in public places inspired the implementation of public access defibrillation (PAD) throughout many countries. Among such places, airports and planes were equipped with automatic external defibrillators (AEDs). In Switzerland, >300 million persons travel by train each year. The question of setting up a PAD program in such places is relevant, at least in high-risk places (<2 OHCA every five years).

Methods: Analysis of OHCA in public places in the Vaud state of Switzerland (650,000 inhabitants) was conducted during a five-year period (2001–2005). Of these, there was a focus on those occurring in train stations and trains.

Results: Of 1,556 OHCA, 306 occurred in public places (19.6%). A detailed analysis revealed that 21 cases (6.9% of public places OHCA) occurred in train stations and trains. Among the train stations, three had more than two OHCA during this five-year period.

Conclusions: The occurrence of OHCA in high-risk train stations justifies the implementation of a PAD program in such places. In airports and airplanes, such programs have saved many lives and have been linked to flight personal basic life support and AED training. The probability of having a health professional among travelers in high-risk places can be a useful gain for provider assistance. A PAD program with cost-effectiveness analysis will be initiated soon in the region along with a local first responder program.

Keywords: out-of-hospital cardiac arrest; public access defibrillation; public health; public places; train stations
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(N59) Effectiveness of Prehospital Triage and Emergency Management during Mass-Casualty Incidents with the Utilization of Information Technology

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Introduction: Information and communication technologies enter many professional fields. Medical rescue services are more frequently equipped with information and communication technologies used for medical assistance during everyday practice. However, mass-casualty incidents (MCIs) require an exceptionally efficient management system and greater information flow in a short period of time. During MCIs, traditional communication systems may be insufficient for obtaining management efficiency. The solution to the problem may be information technology.

Methods: The objective of this study was to evaluate the opportunities of using currently available information and communication technologies in management support systems and telemedicine to increase prehospital triage and management effectiveness.

The study was conducted at the fourth Polish International Winter Championships in Emergency Care in Bielsko-Biala. There were 60 ALS teams. An MCI in which 60 people were injured was simulated. Triage and re-triage effectiveness, transport priorities, and casualty allocation to local hospitals were evaluated using the traditional method, as compared to information and communication technology. The WASKO’s Command Centre Support System was used.

Results: The implementation of information technology resulted in more effective emergency care in triage accuracy, transport priority, emergency department allocation, and time