

ence between clinical and forensic medical diagnoses comprised 1.6% of 1,025 autopsies. According to the study, the sorting card is handy for physicians and nurses. It takes minimum time to fill it in while a patient moves through the diagnostic conveyor. The data on the card are correlated easily with the data recorded at discharge using statistical analysis. This analysis provides a comparative picture at all the stages of treatment. There have to be carried out the main principles of treating patients with poly-trauma: the therapy of shock precedes the diagnostics of injuries.

**Conclusion:** We hope our experience will be useful for the specialists of WADEM, and probably it will help to improve the quality of medical aid for patients with poly-trauma in disasters.

**Keywords:** assortment, medical; autopsies; card, sorting; care, critical; care, intensive; diagnostics; poly-trauma; shockogenics; trauma; treatment

### G-11

#### An Analysis of 129 Trauma Victims Transferred to an Emergency and Critical Care Medical Center in a Middle-Size City

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**Introduction:** Most patients in a Trauma Center in a middle city are transferred from regional hospitals. On the other hand, in a big city, most cases are transported directly to the Center by ambulance-car. Thus, the clinical features of the patients hospitalized in a middle city hospital would differ from those observed in a big city center.

**Purpose:** To investigate the clinical features of trauma victims transferred to the Trauma Center in a middle-size city, Kurume.

**Results:** Between January 1994 and December 1998, 129 trauma patients who were transferred to this Center from regional hospitals died. The mean time between the accident and admission to the Center was  $248 \pm 509$  minutes. Eighty-one victims were injured in traffic accidents (29 car passengers, 19 motorcycle passengers, 11 bicycle passengers, and 22 pedestrians); 30 were injured by free fall, seven fell down; six with compression injuries; two were stabbed, and three from other reasons. The Injury Severity Score (ISS) of elderly victims ( $\geq 65$ yo) was  $38.1 \pm 16.5$ , and the ISS of younger victims ( $< 65$ yo) was  $31.1 \pm 12.9$ . Bicycle passengers and pedestrians were chief causes of trauma for the elderly victims, while car passengers and motorcycle passengers were the principal causes for the younger victims. The chief causes of death were brain injury (74 cases), prolonged severe hemorrhagic shock (33 cases), and infection (9 cases). Especially, the fact that 32 of 33 patients with hemorrhagic shock died within 24 hours is drawing special attention. Several cases might be saved with earlier transportation to the Center.

**Conclusion:** The problems associated with the present

transport network system in a middle-size city were revealed. We will discuss the factors of life-saving in a middle city.

**Keywords:** causes of injuries; injuries; hemorrhagic shock; shock; transfers; trauma centers; trauma deaths

### G-12

#### Trauma Outcome: Review of Results in Urban Hospital in Southern Pakistan

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**Introduction:** It is now accepted that deaths in the trauma setting can be prevented by an organized approach to care. Little has been reported on outcome of trauma patients treated at a low volume, urban hospital in a developing nation with a commitment to provide trauma care. Karachi has a population of nine million, there has been rapid urbanization leading to unemployment, there has been influx of refugees from Afghanistan leading to Kalashnikov culture. Prehospital care is limited to a voluntary ambulance service with limited equipment for resuscitation and communication. The process of trauma care is poorly organized in the hospital settings. We have attempted to look at the outcome of patients and factors leading to poor outcome.

**Methods:** In-hospital care of these patients was reorganized. A trauma team was developed consisting of emergency room physicians, surgery residents, anesthesia, nurses, and other ancillary services; in addition, organization of care was streamlined by removing various hitches. The findings for all trauma patients were carefully documented and the data maintained in trauma registry. The outcome of each individual patient was evaluated using the TRISS method; also the process of care was evaluated.

**Results:** Seventy-three patients were admitted from 01 January to 30 September, 1998. Of these 33 (45.2%) had penetrating injuries. Sixty-two patients were transported by means other than ambulances consequently had not received any prehospital care.

The mean injury severity score was 16.52 with a range of 1–51. There were seven deaths; the mean ISS of the patients who died was 25. The predicted number of deaths for our population based on major trauma outcome study was 4.8. The M-statistic of the data set was 0.95 indicating an excellent match. The individual mortalities were analyzed further in mortality conferences and attempts were made to categorize the deaths.

**Conclusions:** The outcome of patients was less than optimal because of non-existent prehospital care and a poor communication infrastructure. Improved care in the hospital can improve outcome by developing trauma teams, which in our context, was possible, by reorganizing hospital resources.

**Keywords:** deaths; in-hospital; organization; outcome; prehospital; process; severity score; team; trauma; urban hospital; volunteers