

**Keywords:** arterial; diagnosis; embolization; IVR; shock; trauma; treatment

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### Comparison of Abdominal X-ray and CT Scan in 56 Opium and Heroin Body Packers in Mashhad, Iran

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**Introduction:** Opium and heroin body packing is a social and health problem in Mashhad since the city is in the vicinity of the Afghanistan border.

**Objective:** To study health aspects of the body packers admitted in Imam Reza Toxicology Ward between 2001 and 2004 and to compare abdominal X-ray (AXR) and computed tomography (CT) scan for the diagnosis of the patients.

**Methods:** All body packers referred to the Toxicology Ward of Imam Reza Hospital in Mashhad, Iran between 2001 and 2003 were studied. They were hospitalized and underwent close observation for any sign of intoxication. An AXR and a urine morphine test were performed for all patients. An abdominal CT scan also was carried out for 41 of these patients. Naloxane and supportive care were applied to those with clinical manifestations of intoxication. AXR and CT scan results were classified into three groups (highly suggestive, suggestive, and false positive) and compared, using the chi-square test.

**Results:** A total of 56 body packers (54 males and two females) aged  $32.1 \pm 11.3$  years were studied. A mean of  $44.4 \pm 35.1$  opium and  $52.0 \pm 20.0$  heroin packets weighing 8–15 grams were retrieved from 46 and 10 patients, respectively. Most of the patients (43%) were uneducated, while 32%, 23%, and 2% of them had primary, secondary, and university education, respectively. The majority of the patients (71%) were married, but only 25% of them were employed. The highest frequency of admissions was in autumn (18 patients) followed by winter (17 patients) and summer (15 patients). Twenty-six patients were unconscious at the time of admission and six of these were admitted to the intensive care unit (ICU). All unconscious patients responded well to Naloxane. The mean period of hospitalization was  $4.7 \pm 2.7$  days for opium and  $4.1 \pm 0.6$  days for heroin packers. The urine morphine test was positive in 82% of the patients. Nine patients underwent surgical operation and death occurred in only three opium packers. As shown in the table, AXR and CT scan results were significantly different ( $\chi^2 = 46.1$ ,  $\text{diff} = 2$ ,  $p < 0.001$ ).

Considering defecation of the packets as the gold standard diagnostic method, sensitivity of AXR and CT scan in diagnosis of body packing was determined as 92% and 100%, respectively.

**Conclusions:** Although AXR is a simple and more available technique for the diagnosis of opium and heroin body packing, CT scan was shown to be a more significant sensitive diagnostic tool and should be employed as the confirmatory method.

Results	Diagnostic Methods	
	Abdominal X-ray	Abdominal CT Scan
Highly Suggestive	16	40
Suggestive	36	1
False Negative	4	0
<b>Total</b>	<b>56</b>	<b>41</b>

**Table 1—**Comparison of abdominal X-ray and CT scan results in diagnosis of body packing (CT = computed tomography)

**Keywords:** body packing; CT scan; diagnosis; heroin; opium; patients; x-ray

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### Use of Hypnosis in General Emergency Service

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**Introduction:** Hypnosis can provide an interesting support to analgesia and relaxation of patient in a general emergency service. Indications for and feasibility of using hypnosis in such circumstances are reported.

**Methods:** Two indications for using hypnosis were selected. First, it can provide help to manage analgesia. Hypnosis generally can be practiced with children before realization of other techniques (IV line, local or regional anesthesia). Children are more relaxed after hypnosis and therefore respond better to medical examinations and techniques. This indication also is useful for anxious adults as a secondary technique to complement analgesia. A second indication of using hypnosis is relaxation for patients who need non-invasive, respiratory techniques. These patients generally have problems breathing into such apparatuses and an easy technique, like hypnosis, which doesn't modify respiratory rates, helps patients accept non-invasive, respiratory techniques and avoid intubation.

**Conclusion:** The use of hypnosis in an emergency service can help patients accept some techniques used in emergency situations and also can allow patients to be more relaxed and have a better experience with analgesia, especially for children.

**Keywords:** analgesia; children; emergency services; hypnosis; indications; relaxation

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### New Criteria for Deciding Damage Control Surgery for Severe Abdominal Trauma

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**Purpose:** As a standard, factors that determine the need for damage control surgery (DCS) include the deadly triad of acidosis, hypothermia, and coagulopathy. However confirmation of the coagulopathy requires time and it might not be possible to utilize the triad in the emergency room (ER) setting. Therefore, the simple and practical criteria for the DCS (hypotension, hypothermia, and acidosis) in victims of severe abdominal trauma were evaluated.

**Materials and Methods:** The medical charts of 16 patients who underwent DCS from October 2000–April 2004 were reviewed retrospectively. All of the patients were classified into one of two groups: (1) Survived (Group A: 11 cases); and (2) Expired (Group B: 5 cases). The number of patients who underwent DCS, and met the following criteria were evaluated: (1) systolic blood pressure <90 mmHg; body temperature <35°C; and (3) pH <7.3.

**Results:** The aims of the DCS were hemorrhage control for massive hepatic injury in 12 cases (Group A: 7, Group B: 5) or severe pancreatic injury in four cases (all in Group A). The response pattern of the circulation from initial fluid resuscitation revealed transient responders (six cases) or non-responders (10 cases). The severity of injury was greater in B group (ISS of 39.4 and  $p = 0.47$ ) comparing with Group A (ISS of 31.3 and  $p = 0.729$ ). A matching number of these DCS criteria in Group A were 0 (3 cases), 1 (3 cases), 2 (5 cases) and 3 (1 case). On the other hand, all cases matched 3 (full scores) in Group B. The time from admission to fulfill these three criteria between both groups was 40.7 minutes.

**Conclusion:** Although further investigation is needed, the revised DCS decision criteria seems to be useful, and DCS should be performed before the abdominal trauma patient fulfills these three criteria.

**Keywords:** abdominal; acidosis; coagulopathy; criteria; damage control surgery (DCS); emergency department; fluid; hypotension; hypothermia; liver; pancreas; resuscitation; trauma

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### Is Mechanism of Injury a Useful Predictor in Prehospital Trauma Triage?

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This project set out to answer a significant prehospital care question that remained unresolved following the 1999 Review of Trauma and Emergency Services in Victoria, “Is mechanism of injury a useful predictor in prehospital trauma triage?” The performance of triage in physiologically stable, trauma patients for whom only mechanistic criteria are present upon which to make judgments, has a high potential for over-triage; over-estimation of severity of injuries is unavoidable since there is a possibility that potentially serious injuries will be missed. Validation of the predictive value of application of mechanistic triage criteria has been limited in international literature, and hence, its value in predicting the severity of the injuries remains controversial.

However, prehospital trauma triage is a keystone of an effective, regional trauma system. This paper outlines the process and results of a study of the accuracy of the mechanistic triage criteria that was undertaken in a statewide emergency medical services system.

The first step in the process identified the profile for all ambulance trauma responses for the 2002 calendar year. Data will be reported on the state’s population (4.8 million), total trauma responses (53,039), and number of patients in the following categories: (1) physiological distress (1,566, 3%); (2) significant pattern of injury (11,086, 20.9%); and (3) mechanism of injury only (6,664, 12.6%). It is believed that the size and completeness of this data set makes it unique.

The second step was to further analyze the mechanism of injury only category: first, identify the frequency of patients assigned into each of the traditional trauma mechanism categories, and then calculate their predictive values. This analysis identified only two criteria, which demonstrated statistical significance, MCA >60 km/h, and a fall from a height >5m; however, these criteria are of doubtful clinical or operational significance.

This paper will provide further analysis of this category and discuss the implications and limitations of the study. It is believed that this is the largest ambulance-based analysis of the predictive value of mechanism of injury in prehospital trauma triage and the outcomes will be of international significance in contributing to the evidence-base of prehospital trauma triage.

**Keywords:** criteria; database; emergency medical services (EMS); falls; mechanism of injury; prediction; prehospital; severity; trauma; triage

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## Poster Presentations – Tsunami

### Experiences in Sumatra following the Tsunami in Indonesia and the Okushiri Tsunami in Japan

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**Introduction:** Following a request by the Government of Indonesia, the Government of Japan sent the Japan Disaster Relief (JDR) Medical Team to Sumatra. Also, there was a big tsunami in Okushiri Island in Japan in 1993.

**Objective:** The JDR provided medical assistance in a field hospital set up in Banda Aceh from 02–19 January 2005. The experiences obtained from this tsunami were compared with those from the Okushiri tsunami.

#### Results and Discussion:

1. In Banda Aceh, >100,000 residents died by drowning. The first team, which consisted of 22 members including four doctors, treated 1,436 patients during the 10 days. One-quarter of these patients were victims of trauma with infected wounds. Others had respiratory complaints associated with drinking seawater, skin diseases related to bad sanitation, or acute stress disorders.
2. On 12 July 1993, an earthquake and subsequent tsunami struck Okushiri Island in north Japan. A total