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# The Israeli Emergency Room Management of Head Injury Guidelines

## Editorial

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Emergency room management of head injured patients is guided by the severity of injury.

The severity of head injury is defined by the initial Glasgow Coma Scale score (GCS). Patients with a GCS of 3-8 are severely injured, patients with scores of 9-13 have moderate head injury and a score of 14-15 defines mild head injury.

The management protocols for severe head-injured patients are very well defined (1,2). After the initial resuscitation according to the ATLS protocols, all patients undergo head CT and are managed in, or should be transferred to, a neurosurgical trauma unit for further care.

Moderate head injury should be managed in the ER according to the same guidelines: All patients should undergo head CT and be admitted for observation until they recover to a GCS of 15.

The highest load on the ER physician comes from managing patients with mild head injury.

Most ERs in Israel encounter dozens of mild head injuries a day and they comprise about 80 % of all head injuries. Most patients with a mild head injury should be managed by the ER team without the assistance of neurosurgeons or neurologist and the "The Israeli Guideline for Emergency Room Management of Head Injury" is most helpful in that respect.

Most patients with a mild head injury make a full recovery, although some suffer from subtle neurological sequelae. However, about 2-3 percent of these patients, whose initial GCS is 14-15, deteriorate and may suffer severe neurological deficits or die from their injuries.

Acute epidural hematoma may be the cause of such deterioration in a patient with an initial mild head injury. The rapid accumulation of the epidural clot and the rising intracranial pressure may be fatal. Our management goal should be "0 percent mortality from epidural hematomas". To achieve such a goal, we should be liberal with the use of head CT in mild head-injured patients. Early detection will allow for timely surgery, especially if the patient has to be transferred to a neurosurgical unit. Further support for the liberal use of head CT in patients with mild head injury is provided by Stein et al (3). They studied about 700 patients with mild head injury who experienced a brief loss of consciousness or amnesia. 18 percent of them had abnormal initial CT and 5 % required surgery.

The guidelines define several patient populations who are at a higher risk for deterioration, either because of a higher bleeding tendency or assessment difficulties, such as children below 2 years of age. These patients should be managed carefully either by CT scan of the head even though they have not experienced loss of consciousness or amnesia for 24 hours during in-house observation. Patients who are observed for 24 hours may be discharged without CT if no neurological deterioration has occurred although, rarely, late intracranial abnormality may develop.

Special attention should be drawn to the guidelines for releasing head trauma patients from the emergency room. All such patients should have at home a reliable companion who can observe them and bring them back to the ER in case deterioration should occur. Absence of such a companion is an indication for admitting head-injured patients for observation even if they are neurologically intact. The reliable companion should read and sign the Head Injury Warning Discharge Instruction form and a copy of the signed form should be kept in the ER chart.

Careful adherence to the Head Injury Management Guidelines will ensure proper care for head-injured patients and will minimize failures of early detection of treatable injuries.

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