

Description

Describes identification and care guidelines for pediatric trauma patients with head injuries on initial presentation to the ED. These guidelines are developed to assist in clinical decision making and as such, are evidence-based outlines of generally accepted management approaches.

Rationale

Provide guidelines in the care of pediatric trauma patients with mild to moderate head injuries, minimize unnecessary ionizing radiation in children.

Policy/Guideline

Indications for Neurosurgery Consultation

1. Persistent neurological examination findings
2. Abnormal CT or Rapid MRI findings

Definition of Mild Head Injury

Mild head injury is defined as Glasgow Coma Score of 13-15.

Findings may range from none to impairment of consciousness, lethargy, headache, confusion, inconsolable, bulging fontanelle, persistent emesis, nausea, seizure, dizziness.

There are rarely focal neurological deficits present.

Imaging of Mild Head Injury

1. No imaging of mild head injury should be considered when:
 - a. Normal level of consciousness
 - b. Low suspicion of skull fracture, or intracranial hemorrhage
 - c. Low suspicion of non-accidental trauma
 - d. Patient is consolable, not persistently vomiting, has not seized, and is not worsening in clinical status
2. CT imaging of mild head injury should be considered when intracranial injury is suspected and:
 - a. Hemodynamic instability
 - b. Patient is going to the OR emergently for any reason
 - c. High suspicion of a mass lesion (I.E. Blown Pupil or lateralizing exam)
 - d. Palpable deformities of the scalp or skull are present or there is an open laceration/fracture
 - e. Practitioner's discretion on level of suspicion of intracranial injury and urgency of intervention or patient stability
3. Trauma Rapid MRI (multiple plane T2 + SWI) of hemodynamically stable mild head injury patients with supplemental multiple view XR for skull fracture evaluation should be considered when intracranial injury is suspected and:
 - a. Consciousness is normal to mildly depressed
 - b. Patient is hemodynamically stable
 - c. Patient is not likely to proceed emergently to the operating room
 - d. Mechanism is suggestive of potential for intracranial injury such as high velocity or significant fall
 - e. Clinical findings such as neurological deficit or scalp/skull deformity are present in the absence of a correlative history to suggest a traumatic mechanism.

- f. Practitioner's discretion on level of suspicion of intracranial injury and appropriateness of Rapid MRI
4. Spine imaging of mild head injured patients should follow the pediatric spinal imaging guidelines found elsewhere in this policy manual.
5. Radiation exposure from CT is ideally minimized in children with mild to moderate head injury, but a desire to reduce exposure to radiation from CT should not be utilized as a criteria for scanning. Worsening neurologic status regardless of prior imaging should result in further imaging, HCT vs trauma rapid MRI based on clinical stability.

References

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