

**Introduction**

“Mild” traumatic brain injuries (TBI) are frequently encountered in pediatrics with increased numbers of patients seen after implementation of return to play rules in sports. Studies reveal long-term neuropsychological, behavioral, and cognitive issues may occur following injury. To our knowledge, no study has specifically and systematically evaluated symptoms/follow-up in mild TBI patients requiring neurosurgical consultation. We present one neurosurgeon's experience in evaluating and managing these patients.

**Methods**

With IRB approval, retrospective review of consecutive patients presenting to the ED with mild TBI diagnosis codes requiring neurosurgical consultation in 2012 was performed. Outpatient follow-up included serial assessment with the Acute Concussion Evaluation (ACE) form developed by the CDC. Data were collected on injury mechanism, reported symptoms, duration of follow-up, and premorbid conditions felt to contribute to protracted recovery.

**Results**

Thirty-three patients were identified, with thirty having reliable follow-up data for study. Three were lost to follow-up. Mechanisms of injury included motor vehicle crash (8), sports (13), isolated falls (7), and other (2). Twenty-eight were male. Ages ranged 5 to 17 years (mean 11.9). Five carried pre-injury psychiatric diagnoses (e.g. ADHD). Thirteen had negative head CTs. All were admitted for observation.

First mean follow-up occurred 37 days post-injury. Mean reported symptoms on ACE inventory were 3.5; nine patients were symptom-free. One patient with ADHD was symptom-free with others averaging 6 reported symptoms. Patients with negative CTs averaged 3.2 ACE symptoms; those with skull fracture or intracranial blood averaged 3.8 symptoms at initial follow-up. Average length of follow-up was 1.3 visits.

**Conclusions**

Our data suggest that patients with mild TBI often report symptoms for several weeks after injury, particularly if they have psychiatric co-morbidities. Evaluation with the ACE tool helps systemically identify patients experiencing continued symptomatology, prompting appropriate patient management and referral.

**Learning Objectives**

By the conclusion of this session, participants should:

- 1) Have a better understanding of outcomes for the subset of pediatric mild TBI patients referred for neurosurgical evaluation.
- 2) Identify patients at higher risk for protracted recovery from mild TBI.
- 3) Be aware of the resources and services available to assist in the optimal assessment and management of these patients.

**References**

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