

Blunt trauma

Blunt injury, non-penetrating trauma or blunt force trauma refers to physical trauma to a body part, either by impact, injury, or physical attack; the latter usually being referred to as blunt force trauma. The term refers to the initial trauma, from which develops more specific types such as contusions, abrasions, lacerations, and/or bone fractures. Blunt trauma is contrasted with penetrating trauma, in which an object such as a bullet enters the body.

In neurosurgery

- [Successful minimally invasive reduction surgery with a micro burr hole in a pediatric patient with depressed skull fracture: a case report](#)
- [Survival of a patient with an acute traumatic subdural hematoma and high-grade liver injury with associated IVC injury without surgical intervention](#)
- [Effects of Selective Head-and-Neck Cooling on Brain Injury-Related Biomarker Levels and Symptom Rating Following a Boxing Bout: Protocol for an Exploratory Randomized Trial](#)
- [An analysis of potential cervical spine clearance in children with computed tomography alone](#)
- [Management of Traumatic Anterior Skull Base Fractures and Cerebrospinal Fluid Fistulas](#)
- [Pain Management in Mild Traumatic Brain Injury: Central Sensitization as a Multispecialty Challenge](#)
- [Single-nucleus and spatial signatures of the brainstem in normal brain and mild traumatic brain injury in male mice](#)
- [Veterans Traumatic Brain Injuries and Neurosurgical Challenges: A Narrative Review](#)

Traumatic [cervical spine injury](#) are a relatively common sequelae of blunt [trauma](#).

[Traumatic brain injury](#) and intra-[abdominal trauma](#) are 2 leading causes of traumatic [death](#) and [disability](#) in [children](#). To avoid missed or delayed diagnoses leading to increased [morbidity](#), [computed tomography](#) (CT) is used liberally. However, the overuse of CT leads to [inefficient care](#) and [radiation](#)-induced malignancies. Therefore, to maximize precision and minimize the overuse of CT, the Pediatric Emergency Care Applied Research Network ([PECARN](#)) previously derived clinical [prediction rules](#) for identifying [children](#) at high [risk](#) and very low risk for intra-[abdominal trauma](#) undergoing acute [intervention](#) and clinically important [traumatic brain injury](#) after [blunt trauma](#) in large [cohorts](#) of [children](#) who are injured.

A study aimed to validate the IAI and age-based TBI clinical prediction rules for identifying children at high risk and very low risk for IAI's undergoing acute intervention and clinically important TBIs after blunt trauma.

This was a prospective 6-center observational study of children aged <18 years with the blunt torso or head trauma. Consistent with the original derivation studies, enrolled children underwent a routine history and physical examinations, and the treating clinicians completed case report forms prior to knowledge of CT results (if performed). Medical records were reviewed to determine clinical courses

and outcomes for all patients, and for those who were discharged from the emergency department, a follow-up survey via a telephone call or SMS text message was performed to identify any patients with missed IAIs or TBIs. The primary outcomes were IAI undergoing acute intervention (therapeutic laparotomy, angiographic embolization, blood transfusion, or intravenous fluid for ≥ 2 days for pancreatic or gastrointestinal injuries) and clinically important TBI (death from TBI, neurosurgical procedure, intubation for >24 hours for TBI, or hospital admission of ≥ 2 nights due to a TBI on CT). Prediction rule accuracy was assessed by measuring rule classification performance, using a standard point and 95% CI estimates of the operational characteristics of each prediction rule (sensitivity, specificity, positive and negative predictive values, and diagnostic likelihood ratios).

The project was funded in 2016, and enrollment was completed on September 1, 2021. Data analyses are expected to be completed by December 2022, and the primary study results are expected to be submitted for publication in 2023.

This study will attempt to validate previously derived clinical prediction rules to accurately identify children at high and very low risk for clinically important IAIs and TBIs. Assuming successful validation, widespread implementation is then indicated, which will optimize the care of children who are injured by better aligning CT use with need.

International registered report identifier (irrid): RR1-10.2196/43027 ¹⁾.

Superficial temporal artery pseudoaneurysm (STAP) is an uncommon complication of blunt and penetrating trauma

Blunt cerebrovascular injury

¹⁾

Ugalde IT, Chaudhari PP, Badawy M, Ishimine P, McCarten-Gibbs KA, Yen K, Atigapramoj NS, Sage A, Nielsen D, Adelson PD, Upperman J, Tancredi D, Kuppermann N, Holmes JF. Validation of Prediction Rules for Computed Tomography Use in Children With Blunt Abdominal or Blunt Head Trauma: Protocol for a Prospective Multicenter Observational Cohort Study. JMIR Res Protoc. 2022 Nov 24;11(11):e43027. doi: 10.2196/43027. PMID: 36422920.

From:

<https://neurosurgerywiki.com/wiki/> - **Neurosurgery Wiki**

Permanent link:

https://neurosurgerywiki.com/wiki/doku.php?id=blunt_trauma

Last update: **2024/06/07 02:52**

