

A Research Study of Abdominal Ultrasound (FAST) in Children With Blunt Torso Trauma

Status: RECRUITING

Eligibility Criteria

Sex: ALL

Age: Up to 17 years old

Healthy Volunteers: This study is NOT accepting healthy volunteers

Children younger than 18 years of age (0 to 17.9999 years) with blunt abdominal trauma presenting to the participating EDs within 24 hours of the traumatic event will be eligible if they do not meet any exclusion criteria and meet any one of the following inclusion criteria.

Inclusion Criteria:

1. Blunt torso trauma resulting from a significant mechanism of injury:
 - Motor vehicle collision: greater than 60 mph, ejection, or rollover
 - Automobile versus pedestrian/bicycle: automobile speed > 25 mph
 - Falls greater than 20 feet in height
 - Crush injury to the torso
 - Physical assault involving the abdomen
1. Decreased level of consciousness (Glasgow Coma Scale (GCS) score 9-14 or below age-appropriate behavior) in association with blunt torso trauma
2. Blunt traumatic event with any of the following (regardless of the mechanism):
 - Extremity paralysis
 - Multiple long bone fractures (e.g., tibia and humerus fracture)
1. History and physical examination suggestive of blunt torso trauma of any mechanism (including mechanisms of injury of less severity than mentioned above)

Exclusion Criteria:

The following patients will be excluded from the study:

1. Age-adjusted low blood pressure (Hemodynamic instability)
- Patients will be excluded for prehospital or initial age-adjusted ED low blood pressure. This is because the standard evaluation of these patients involves immediate FAST based on prior work by our group. Low blood pressure is determined based upon the patient's age, and will be defined as a systolic blood pressure less than 70 mm Hg for patients younger than 1 month, less than 80 mm Hg for ages 1 month to 5 years, and less than 90 mm Hg for ages over 5 years.
 1. Penetrating trauma: Patients who are victims of stab or gunshot wounds
 2. Traumatic injury occurring > 24 hours prior to the time of presentation to the ED
 3. Transfer of the patient to the ED from an outside facility with abdominal CT scan, diagnostic peritoneal lavage, or laparotomy previously performed
 4. Transferred with FAST exam already performed at outside hospital
 5. Patients with known disease processes resulting in intraperitoneal fluid including liver failure and the presence of ventriculoperitoneal shunts
 6. Initial GCS score ≤ 8 as it is standard for children with GCS scores ≤ 8 to undergo abdominal CT if blunt abdominal trauma is suspected
 7. Known pregnancy
 8. Known prisoner
 9. Known intra-abdominal injury diagnosed within 30 days prior to this ED visit

Conditions & Interventions

Interventions:

DIAGNOSTIC_TEST: Focused Assessment with Sonography for Trauma (FAST) Examination, OTHER: No Intervention: Standard of Care - Without the FAST Examination

Conditions:

Blunt Trauma to Abdomen, Wounds and Injuries, Abdomen Injury, Abdominal Injury, Abdomen, Acute

Keywords:

Child, Wounds and Injuries, Blunt Trauma to Abdomen, Abdomen Injury, Blunt Abdominal Trauma

More Information

Description:

Bleeding from intra-abdominal injuries is a leading cause of traumatic deaths in children. Abdominal CT is the reference standard test for diagnosing intra-abdominal injuries. Compelling reasons exist, however, to both aggressively evaluate injured children for intra-abdominal injuries with CT and to limit abdominal CT evaluation to solely those at non-negligible risk. The focused assessment sonography for trauma (FAST) examination can help focus patient evaluation in just this manner by potentially safely decreasing abdominal CT use in low risk children. This research study is a

multicenter, randomized, controlled trial to determine whether use of the FAST examination, a bedside abdominal ultrasound, impacts care in 3,194 hemodynamically stable children with blunt abdominal trauma. The overall objectives of this proposal are 1) to determine the efficacy of using the FAST examination during the initial evaluation of children with blunt abdominal trauma, and 2) to identify factors associated with abdominal CT use in children considered very low risk for IAI after a negative FAST examination. The long-term objective of the research is to determine appropriate evaluation strategies to optimize the care of injured children, leading to improved quality of care and a reduction in morbidity and mortality.

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Principal Investigator:

Principal Investigator ID:

Phase: NA

IRB Number:

System ID: NCT05910567

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