Non-Accidental Trauma in the Trauma Network

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Disclosures

Dr. Zate has nothing to disclose.
Objectives

• Establish conceptual framework for non-accidental trauma in the Trauma Network.
• Identify potential pitfalls in emergency care of child abuse patients.
FRAMEWORK

Non-accidental Trauma in the Trauma Network
Abusive Trauma or Trauma, Abusive?

Trauma first, always!
PITFALL #1:
IDENTIFYING PATIENTS

When You Don’t Have a History You Can Trust
Diagnosing Trauma

1. History
2. History
3. History
4. Physical findings in absence of history
Diagnosing Abusive Trauma

1. Untruthful history of trauma
2. Physical findings in absence of history
3. Incidental discovery of an injury
Late Entry into the System

J.C.

2mo boy presenting with respiratory distress
PITFALL #2: DETERMINING SEVERITY OF INJURY

Assigning a Trauma Level and Minimizing Risk of Misclassification
Assailant suffers injuries from fall

Orville Smith, a store manager for Best Buy in Augusta, Ga., told police he observed a male customer, later identified as Tyrone Jackson of Augusta, on surveillance cameras putting a laptop computer under his jacket. When confronted the man became irate, knocked down an employee, drew a knife and ran for the door.

Outside on the sidewalk were four Marines collecting toys for the Toys for Tots program, Smith said the Marines stopped the man, but he stabbed one of the Marines, Cpl. Phillip Duggan, in the back; the injury did not appear to be severe.

After Police and an ambulance arrived at the scene Cpl. Duggan was transported for treatment.

"The subject was also transported to the local hospital with two broken arms, a broken ankle, a broken leg, several missing teeth, possible broken ribs, multiple contusions, assorted lacerations, a broken nose and a broken jaw...injuries he sustained when he slipped and fell off of the curb after stabbing the Marine," according to a police report.
Determination of Trauma Level with No History

- Based on injury alone
- Accident correlation
8mo girl, no history of trauma
Option 1: Based on injury alone

Trauma level = 3

Assumes isolated traumatic event
May underestimate severity
Option 2: Accident Correlation

What kind of accidental trauma could cause an injury like this?

Motorcycle Crash?
MV vs. Pedestrian
High fall?

Trauma level = 2

Based on mechanism/correlation
PITFALL #3
EVALUATION FOR OCCULT INJURY
And Other Shiny Objects
Shiny Objects

- Police/CPS
- Sexual assault kits
- Assessing for non life-threatening injury
Assessing for Occult Injury

• Consistent evaluation of a given injury in a child of a given age

• Lowest possible risk:benefit
The Workup

Suspected abusive injury

Occult injuries
Evaluate based on child’s age

Medical condition
Evaluate based on child’s injuries

Two-pronged approach
Screening for Occult Injury

• Head Imaging
  – Under 1 year

• Ophthalmologic Examination
  – If head imaging is positive

• Skeletal Survey
  – Under 2 years

• Labs
  – Under 6 years
    – Chemistry, LFTs, Amylase/Lipase, UA

• Screening tests for medical causes
Timing is Everything

• Head Imaging
  – Within 3 days if patient clinically stable
• Ophthalmologic Examination
  – Within 3 days if patient clinically stable
• Skeletal Survey
  – Within 1 week if patient clinically stable
• Labs
  – Immediately!
• Screening tests for medical causes
  – Whenever
References:


