

Critical decisions
in emergency medicine

Pediatric Trauma Second Edition



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Pediatric Trauma Second Edition

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Checked Out

Recognizing Child Neglect



By Rachael Jackson, DO; and Heather Rozzi, MD, FACEP

Dr. Jackson is an emergency medicine resident and Dr. Rozzi is an emergency physician at WellSpan York Hospital in York, Pennsylvania.

Reviewed by Erika B. Crawford, MD, FAAP, FACEP

Objectives

On completion of this lesson, you should be able to:

1. Name the different types of child neglect.
2. List risk and protective factors for child neglect.
3. Recognize clinical indicators of child neglect.
4. Discuss best practices for assessment, documentation, and reporting of child neglect.
5. State the importance of teamwork with social workers, CPS, and other health care professionals in the management of child neglect.

From the EM Model

14.0 Psychobehavioral Disorders

14.6 Patterns of Violence/Abuse/Neglect

CRITICAL DECISIONS

- What are the different types of child neglect and how do they manifest?
- What are some risk factors for child neglect?
- What are some protective factors for child neglect?
- How should emergency physicians assess children who are being neglected?
- What are best practices for the documentation and reporting of suspected child neglect cases?
- How can emergency physicians work with social workers, CPS, and other health care professionals to manage children who are being neglected?

Child neglect is the most prevalent form of child maltreatment in the United States, yet it remains the one most likely to be overlooked in the emergency department.¹

Unlike physical abuse, where injuries immediately raise concern, neglect often announces itself quietly. It may manifest as injuries, poor nutrition, untreated dental disease, recurrent asthma exacerbations (from medication gaps), or behaviors that make children appear withdrawn or developmentally behind.



Domestic Terror

Identifying Child Abuse



By Elaine S. Pomeranz, MD

Reviewed by Sharon E. Mace, MD, FAAP, FACEP

Objectives

On completion of this lesson, you should be able to:

1. Compare and contrast characteristics of children's medical history that should raise suspicion for abuse.
2. Explain how skeletal survey findings can help with forensic evaluation.
3. Discuss the appropriate emergency department evaluation of infants with altered mental status.
4. Identify characteristics of soft tissue injuries that raise the index of suspicion for physical abuse.
5. Describe medical child abuse and emergency physicians' role in its identification and investigation.

From the EM Model

14.0 Psychobehavioral Disorders

14.6. Patterns of Violence/Abuse/Neglect

14.6.1 Interpersonal Violence

14.6.1.1 Child

CRITICAL DECISIONS

- What examination findings should raise suspicion for physical child abuse?
- What are the most important considerations when evaluating infants with suspected trauma caused by abuse?
- What tests are essential when assessing babies with altered mental status of unknown etiology?
- What is the best way to evaluate suspected cases of factitious disorder imposed on another and what can be done to protect victims from further harm?
- What legal obligations do emergency physicians have in cases of suspected child abuse?

Child abuse, which crosses all socioeconomic, racial, and ethnic lines, constitutes a true public health crisis. According to national statistics, nearly 1% of children (9.1/1,000) will be victimized.¹ No physician wants to lose an opportunity to prevent the death or permanent disability of pediatric patients under any circumstances, but there are additional moral and legal imperatives for intercepting child abuse, which can be challenging to diagnose and lethal if missed.

An Infant With Fever and Leg Swelling



By Joshua S. Broder, MD, FACEP

Dr. Broder is a professor and the residency program director in the Department of Emergency Medicine at Duke University Medical Center in Durham, North Carolina.

Objectives

On completion of this article, you should be able to:

- Recognize ultrasound findings of a long bone fracture.
- Recall that femur fracture can be an indication of NAT in children younger than 36 months.
- Describe the importance of a skeletal survey in children ≤ 24 months with suspected physical abuse.

CASE PRESENTATION

A 10-month-old boy is brought in by his foster mother for vomiting and decreased oral intake today. The foster mother also notes hard pink spots on the boy's left upper leg, which she thinks may be insect bites. She also thinks the area may be causing the patient pain.

The patient is developmentally delayed and does not yet roll over independently. His immunizations are up to date. He attends day care. His vital signs are BP 102/74, P 168, R 28, and T 38.1°C (100.6°F); his SpO₂ is 100% on room air.

During examination, the patient is alert and does not appear to be in distress. He has clear nasal secretions. His heart, lung, and abdominal examinations appear normal. The left thigh has scattered pink papules and is somewhat swollen and indurated (*Figure 1*). The emergency physician performs an ultrasound of the left thigh (*Figure 2*). X-rays are also ordered (*Figures 3 and 4*).



FIGURE 1. The patient's lower extremities

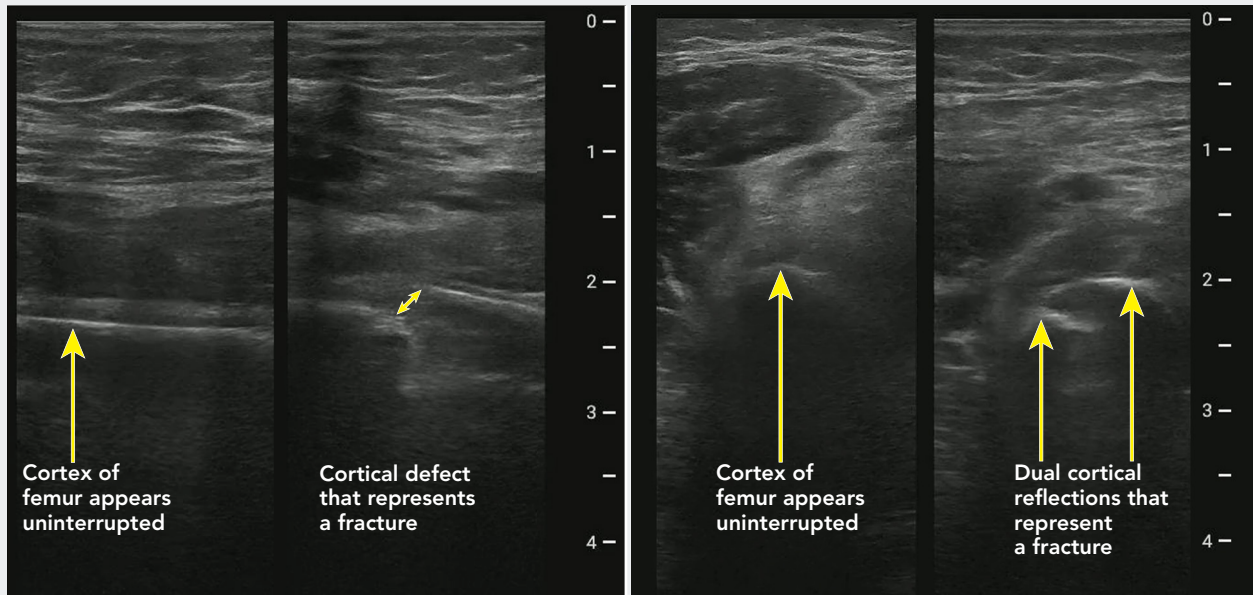
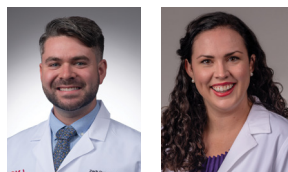


FIGURE 2. Ultrasound of the left thigh. The cortex of the femur brightly reflects the ultrasound beam and appears white, with acoustic shadowing (*black*) deep to the cortical surface. On the left, a longitudinal view demonstrates an uninterrupted normal segment of the femur, as well as a cortical disruption that indicates a fracture. On the right, a transverse view shows a single curved, intact cortex and a dual cortical reflection that represents a fracture. The superficial soft tissues do not show a discrete fluid collection to indicate an abscess, nor cobblestoning to suggest cellulitis.



Know Your ABCs

Managing Pediatric Trauma Patients



By Zack Dunn, DO; and Erika B. Crawford, MD, FAAP, FACEP

Reviewed by Sharon E. Mace, MD, FAAP, FACEP

Objectives

On completion of this lesson, you should be able to:

1. Describe prehospital care for pediatric trauma patients.
2. Distinguish the primary and secondary surveys of pediatric trauma patients from surveys of adult trauma patients.
3. Recognize the anatomic and physiologic differences between pediatric and adult trauma patients.
4. Apply the PECARN Pediatric Head Injury/Trauma Algorithm to guide neuroimaging for TBI in pediatric trauma patients.
5. Describe the limitations of the FAST examination in the evaluation of pediatric trauma patients.
6. Evaluate for nonaccidental trauma in pediatric patients.

From the EM Model

- 19.0 Procedures and Skills Integral to the Practice of Emergency Medicine
- 19.1 Airway Techniques
- 19.2 Resuscitation
- 19.4 Diagnostic and Therapeutic Procedures

CRITICAL DECISIONS

- What is the importance of prehospital care in treating pediatric trauma patients?
- How are primary and secondary surveys of pediatric trauma patients different from surveys of adult trauma patients?
- What are the deadliest traumatic injuries in the pediatric population?
- When is the FAST examination used to evaluate pediatric trauma patients?
- When should nonaccidental trauma be included in the differential diagnosis of pediatric trauma patients?

Every year in the United States, approximately 8.7 million injured children are treated in emergency departments, and over 9,000 die from traumatic injuries. Emergency physicians must be proficient in pediatric trauma stabilization to avoid missing or mismanaging traumatic injuries, accidental and otherwise, that contribute to substantial morbidity and mortality in the pediatric population.