



The Biggest Myth about Child Abuse

The biggest myth is that the dangers to children come from strangers. In most cases, the perpetrator is someone the parent or child knows, and is often trusted by the child and family.

CHILD ABUSE: AN OVERVIEW OF CHILD PHYSICAL ABUSE

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5/20/2011

OBJECTIVES

- To bring abuse to mind as a diagnosis in babies and young toddlers
- To briefly discuss the incidence and prevalence of child abuse
- To discuss documentation of the history and physical findings
- To know the components of a thorough medical evaluation for physical abuse
- To recognize patterned injuries and presentations



CHILD ABUSE

- **Physical abuse** is nonaccidental physical injury as a result of punching, beating, kicking, biting, shaking, throwing, stabbing, choking, hitting, burning, or otherwise harming a child, that is inflicted by a parent, caregiver, or other person who has responsibility for the child. **Such injury is considered abuse regardless of whether the caregiver intended to hurt the child.**



INTRO CLINICAL SCENARIO

- 2 month old is brought into your office for a well baby check. Her vital signs and physical exam are within normal limits for age except that you notice that she has a bruise on her medial ankle. What do you do? What do you document? What tests do you order or not?



QUESTION 1– WHAT WOULD YOU DO?

- Nothing, small bruise that mother stated was due to car seat buckle and send child home
- Document finding, but otherwise this is a normal well baby exam
- Call DCBS to report concern for abuse
- Send child to hospital for Head CT, Skeletal survey, CBC, PT, PTT, amylase, ALT, UA



GENERAL STATISTICS

- **A report of child abuse is made every ten seconds.**
- **Almost five children die everyday** as a result of child abuse. More than three out of four are under the age of **four**.
- About 30% of abused and neglected children **will later abuse their own children.**
- The estimated annual cost of child abuse and neglect in the United States for 2007 is **\$104 billion.**



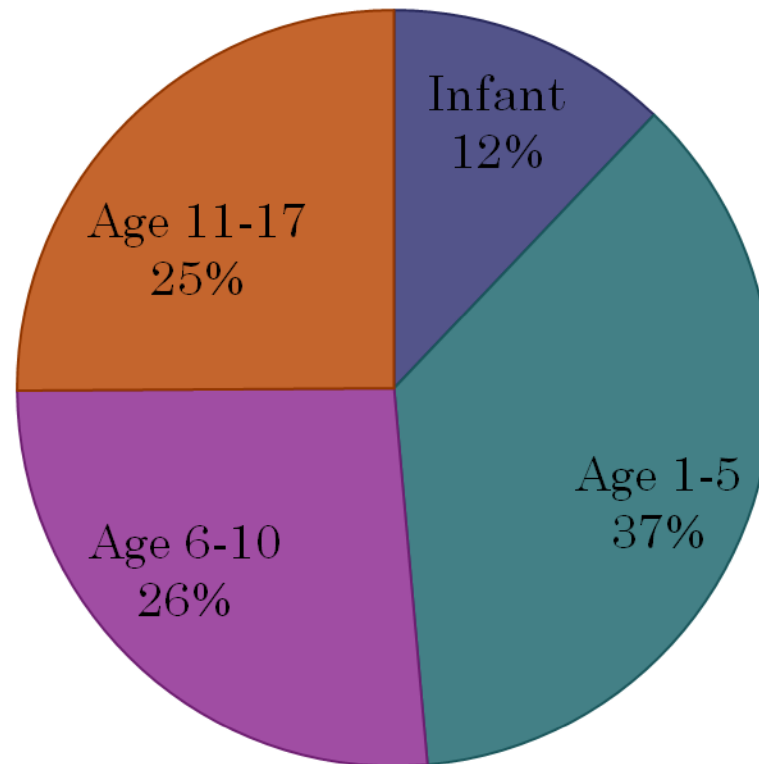
INCIDENCE AND PREVALENCE OF CHILD ABUSE IN KENTUCKY IN 2009

- 63,678 children were reported as abused, neglects, or in need of protective services
- 23 children died as a result of child abuse and neglect during the 2009 fiscal year
- Every 8 minutes a child is reported as abused or neglected in the state of Kentucky
- In 2007, Kentucky was 1st in the nation in child mortality by abuse

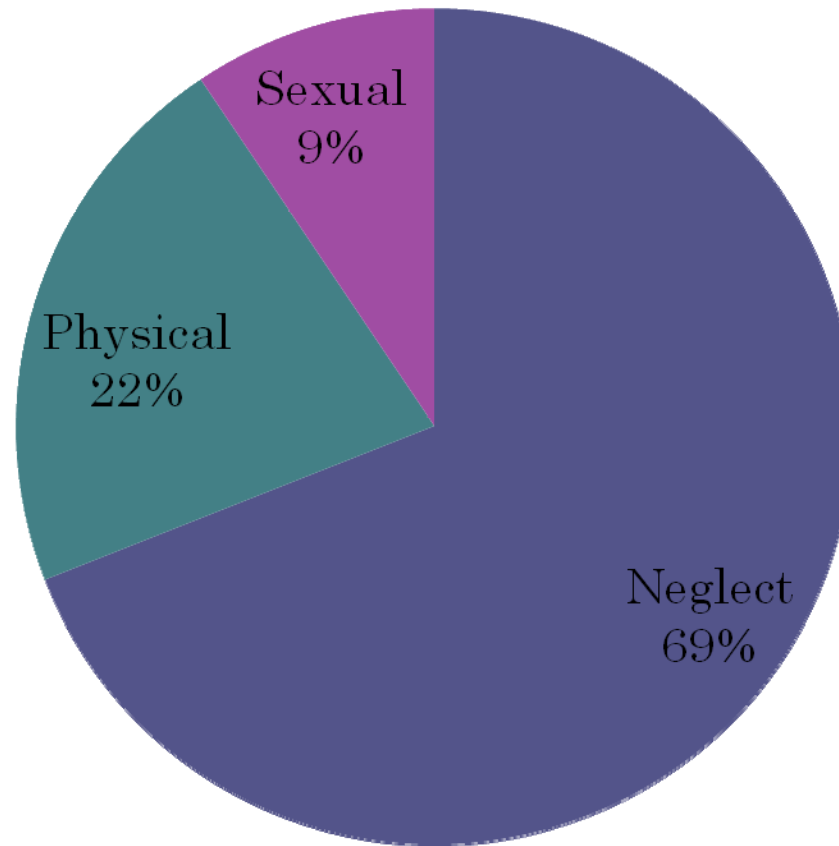


KENTUCKY SUBSTANTIATED CHILD VICTIMS OF ABUSE & NEGLECT BY AGE

Child Abuse



MALTREATMENT BY TYPE IN KENTUCKY IN 2009



WHICH CHILDREN ARE AT RISK?

- Parent or caregiver factors:
 - Personality characteristics
 - Psychological well-being (untreated/inadequately treated mental illness)
 - History of maltreatment
 - Substance abuse
 - Attitudes and knowledge
 - Immaturity



WHICH CHILDREN ARE AT RISK?

- Family Factors:

- Non-biological male living in the home
- Marital conflict/Domestic Violence
- Lower economic status
- High stress level/lack of social support



WHICH CHILDREN ARE AT RISK?

- Child Factors

- Age (3 and younger have the highest risk)
- Disability (Physical/Cognitive/Emotional)
- Prematurity
- Long-awaited child



WHICH CHILDREN ARE AT RISK?

- Environmental Factors

- Poverty
- Unemployment
- Social isolation
- Violent communities



ABSENCE OF RISK FACTORS IS *NOT* THE
ABSENCE OF RISK!!!



Table 3. Differential Diagnosis Of Possible Physical Abuse.

Bruises Trauma <ul style="list-style-type: none"> • Accidental • Non-accidental (physical abuse) Hematologic disorders <ul style="list-style-type: none"> • Platelet disorders or platelet dysfunction • Platelet deficiencies (thrombocytopenia) • Thrombotic thrombocytopenia purpura • Idiopathic thrombocytopenia • Drug- or toxin-induced • Factor deficiencies • Hemophilia • Hemorrhagic disease of the newborn • Von Willebrand's disease Malignancies <ul style="list-style-type: none"> • Leukemia Infections <ul style="list-style-type: none"> • Viral infection/exanthems • Sepsis • Rickettsial infections • Streptococcal infections • Congenital syphilis 	Rheumatic/autoimmune/collagen vascular diseases <ul style="list-style-type: none"> • Systemic lupus erythematosus • Rheumatic fever • Acute glomerulonephritis • Henoch-Schonlein purpura Folk remedies <ul style="list-style-type: none"> • Coining • Cupping • Spooning Skin lesions/dermatologic disorders <ul style="list-style-type: none"> • Birthmarks/congenital lesions • Mongolian spots • Hemangiomas Nutritional <ul style="list-style-type: none"> • Vitamin C deficiency (scurvy) Inborn errors of metabolism <ul style="list-style-type: none"> • Letterer-Siwe disease • Ehlers-Danlos syndrome • Glutaric aciduria type I Burns Vesiculobullous skin disorders <ul style="list-style-type: none"> • Infectious (impetigo, toxic epidermal necrolysis, staphylococcal scalded skin syndrome, dermatitis 	herpetiformis, candidal diaper dermatitis, varicella, smallpox, scabies (vesicular presentation), herpes simplex, herpes zoster) <ul style="list-style-type: none"> • Noninfectious (phytodermatitis [contact dermatitis], sunburns, allergic diaper dermatitis, frostbite, dyshydrotic eczema, non-congenital dermatitis herpetiformis, bullous pemphigoid, bullous dermatitis) Folk remedies (moxibustion) Fixed drug eruptions Skeletal Injuries <ul style="list-style-type: none"> • Inherited disorders (osteogenesis imperfecta, inherited rickets, copper deficiency [Menkes kinky hair syndrome]) • Acquired diseases (nutritional rickets, copper deficiency due to dietary deficiency, scurvy) • Drug-induced skeletal disorders • Infections (congenital syphilis) • Metabolic/endocrine diseases (osteoporosis) • Miscellaneous (infantile cortical hyperplasia)
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Mace, S. "Child Physical Abuse: A State-of-the-Art Approach." Pediatric Emergency Medicine Practice. Sept 2004, Vol 1(2); 1-20. EBMedPractice.net

RED FLAGS FOR HISTORY

- Delay in seeking medical care
- **Implausible or changing history**
- Unexplained injury
- Previous injuries
- Multiple presentations to ED
- History of abuse (sibling or domestic violence)



QUESTIONS TO ASK....

- Who is/are the primary caregivers?
- When did the caregivers first notice symptoms/bruises?
 - Does the history change with changing information given to the caregiver?
 - Do different witnesses give different accounts?
 - What did they do after they noticed these symptoms?
- When was the child last normal?
 - In young infants it can be difficult to tell
 - Tracking, cooing, smiling, eating without vomiting



QUESTIONS TO ASK....

- Have there been any accidents?
- Are there other children at home or not living with the family?
- Has the child had any injuries before?
- Is there a history for SIDS or any other unexpected death of a young child?



WHAT TO DOCUMENT?

- Detailed physical examination documentation with appropriate drawings
 - Photo-documentation as soon as possible is fast-becoming the standard of care
 - Be sure the child is completely unclothed during examination and the lights are on in the room
 - Document location, size, and shape of all bruising or unusual markings



WHAT TO DOCUMENT?

- A careful and well documented history
 - Use quotes whenever possible
- Document detailed descriptions of the mechanisms of injury or injuries with inclusion of the progression of symptoms
 - Also ask what caregiver did when they noticed these

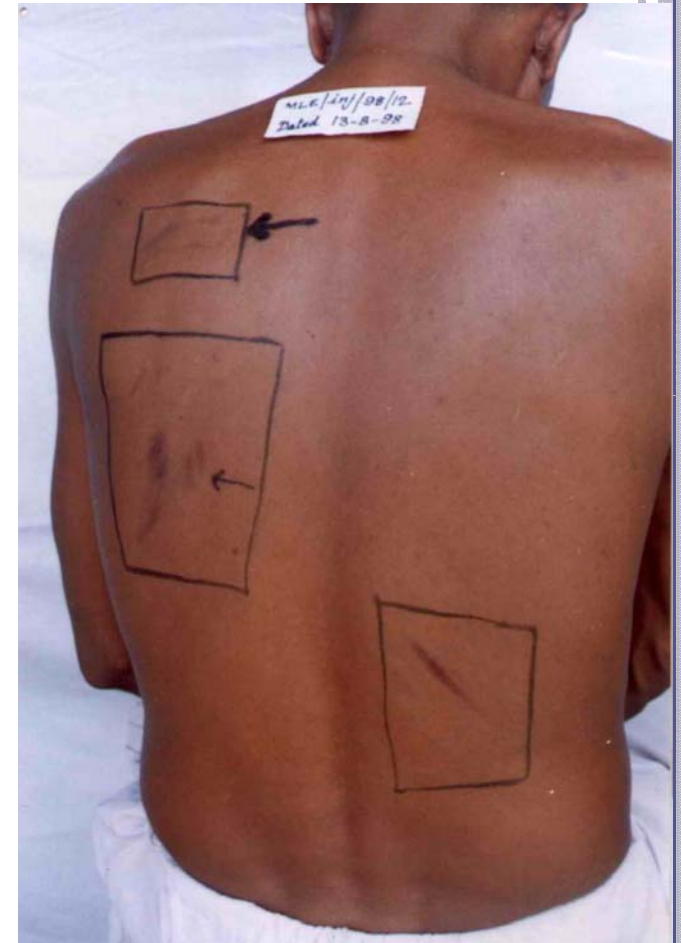


RED FLAGS FOR BRUISING

- Bruising to multiple planes or body surfaces (eg, left and right side), without plausible explanation
- Bruises to the head (with the exception of the forehead), neck, ears, and torso*
 - TEN-4 rule!!!
- ******More than half of Kentucky child abuse fatalities in 2005 had documented evidence of bruising in the medical record prior to death that was unreported, not evaluated, or both.***



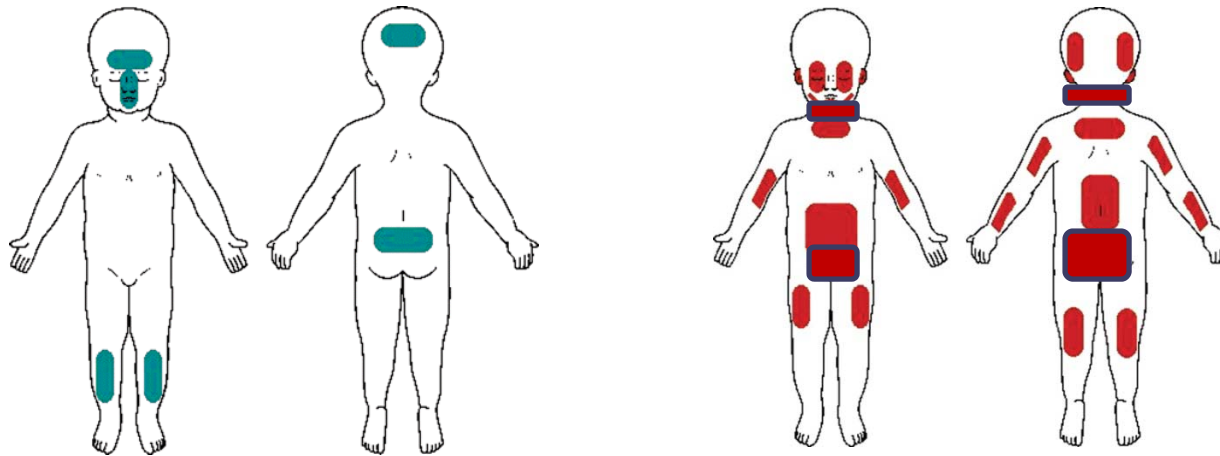
BRUISING



TEN-4-BCDR



WHICH BRUISES ARE SUSPICIOUS?



Any bruising on a baby 4 months or younger deserves a full work-up





**Approximately 6 hours
later**



MEDICAL PHOTOGRAPHY

- ▶ **Obtained informed consent is not required in open investigations of child abuse**
- ▶ Photograph injuries:
 - prior to treatment
 - from different angles (at least 2 pictures of each injury)
- ▶ Use a ruler or measurement device to give perspective



MEDICAL PHOTOGRAPHY

- Include the patient's face in at least one of the pictures
 - With identifiers
- Document the patient's name, injury location, date, photographer on/in picture (a patient label is great for this)



MEDICAL WORK-UP FOR SUSPICION OF CHILD ABUSE

○ <12 months

- Skeletal survey**
- CT of head
- Dilated fundoscopic exam
- CBC, PTT, PT, amylase, ALT, and UA*
- Perform Abdominal/Pelvic CT if:
 - Positive trauma labs
 - Bruising on abdomen/trunk
 - Bilious vomiting
 - *consider CPK if extensive bruising
 - **Follow-up skeletal survey usually performed within 2 weeks of initial skeletal survey



MEDICAL WORK-UP FOR SUSPICION OF CHILD ABUSE

- ▶ 13-24 months
 - **Strongly recommend:**
 - Skeletal survey**
 - **Recommend:**
 - CT of head:
 - If head/neck/ear/face bruising or swelling
 - If signs or symptoms of neurological impairment present
 - Dilated fundoscopic exam:
 - If brain injury present
 - CBC, PTT, PT, amylase, ALT, and UA*
 - Abdominal/Pelvic CT if:
 - Positive trauma labs
 - Bruising on abdomen/trunk
 - Bilious vomiting
 - *consider CPK if extensive bruising
 - **Follow-up skeletal survey usually performed within 2 weeks of initial skeletal survey



MEDICAL WORK-UP FOR SUSPICION OF CHILD ABUSE

▶ 2-5 years:

- **Consider:**

- Skeletal survey**

- If severe trauma
- If child is non-verbal, unresponsive, or extreme developmental delay

- CT of head:

- If head/neck/ear/face bruising or swelling
- If signs or symptoms of neurological impairment present

- Dilated fundoscopic exam:

- If brain injury present

- CBC, PTT, PT, amylase, ALT, and UA*

- Abdominal/Pelvic CT if:

- Positive trauma labs
- Bruising on abdomen/trunk
- Bilious vomiting
 - *consider CPK if extensive bruising
 - **Follow-up skeletal survey usually performed within 2 weeks of initial skeletal survey



CLINICAL SCENARIO 2

- A 3-year-old boy is brought to the emergency department for examination after being removed from his home because of concerns of physical abuse and neglect. He has no symptoms, and is eating chicken nuggets and french fries in the examination room. Examination reveals faint rounded bruises on his right upper and mid abdomen, but his abdomen is nontender and nondistended with normal bowel sounds.



QUESTION 2– WHAT WOULD YOU DO?

- Nothing, small bruise that mother stated was due to car seat buckle and send child home
- Document finding, but otherwise this is a benign exam
- Call DCBS to report concern for abuse
- Obtain Head CT, Skeletal survey, CBC, PT, PTT, amylase, ALT, UA, and abdominal CT

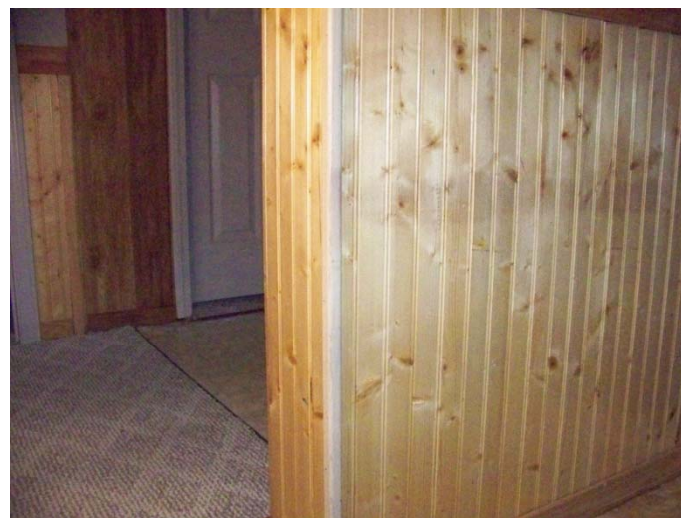


A FEW EXAMPLES





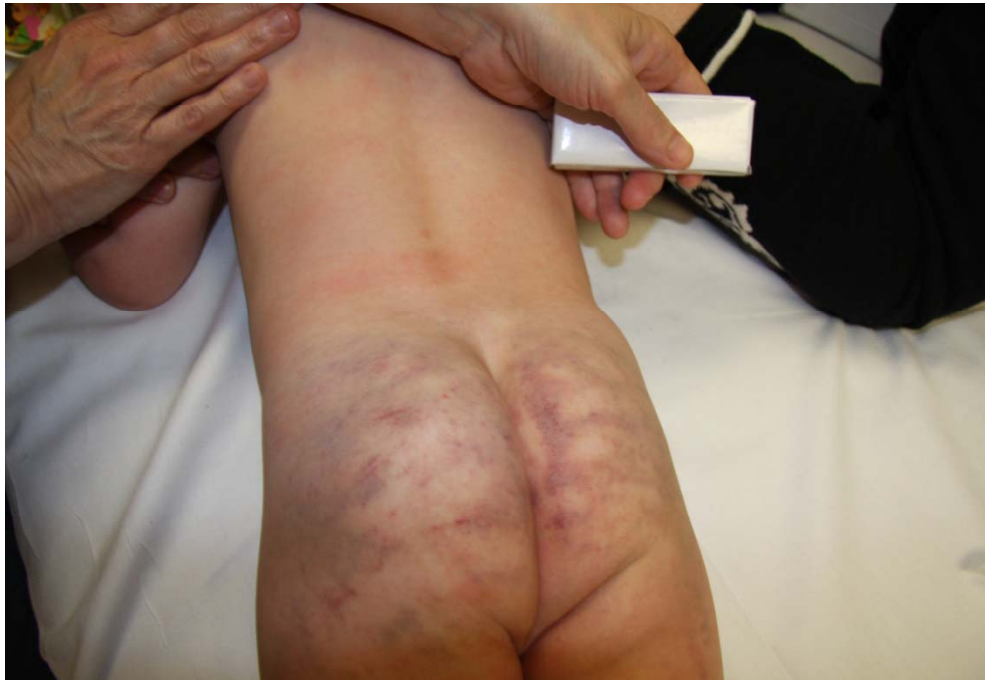


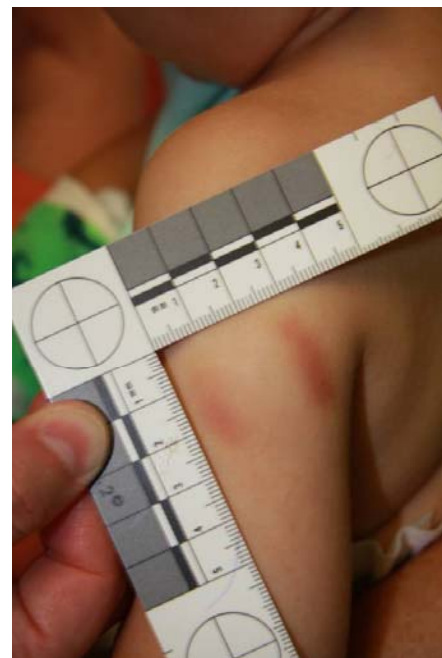








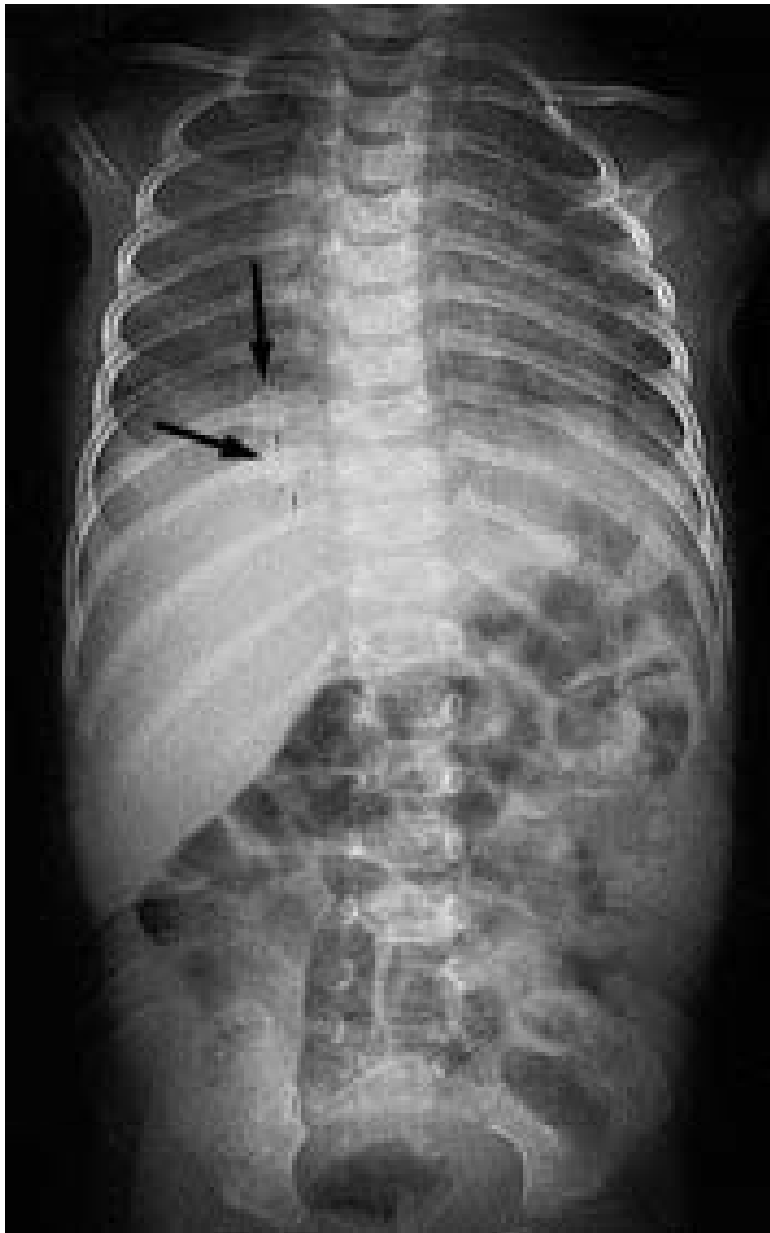




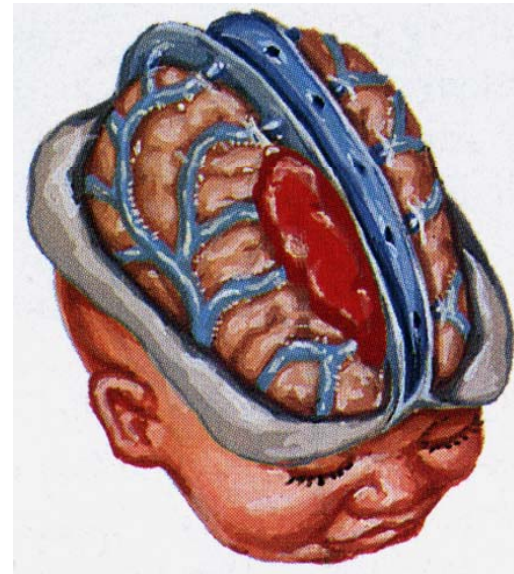
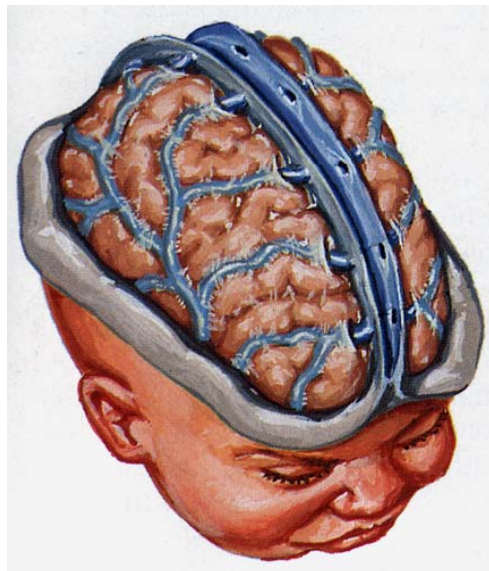
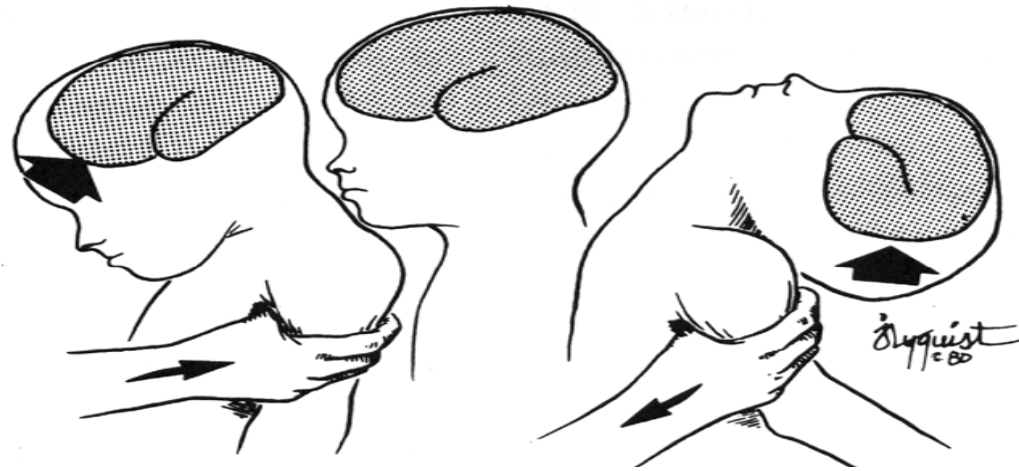


WHAT IS THIS?





SHAKEN BABY SYNDROME (AKA ABUSIVE HEAD INJURY)



MIMICS

- Impetigo
- Mongolian spots
- Scalded Skin Syndrome
- Coining or cupping
- Phytophotodermatitis (hypersensitivity skin reaction related to lime juice, celery, etc + sunlight)
- Dye
- Bleeding Disorders



CLINICAL SCENARIO 3

- 4-month-old baby boy presents for well child exam and is noted to have two fingertip-sized bruises on each thigh. Parents explain that they came from a diaper change when the child was squirming. Social history offers no red flags. You've seen the older sib for the past two years.
- What do you do?



WHAT DO YOU DO?

- Nothing, small bruise that mother stated was due to car seat and send child home
- Document finding, but otherwise this is a normal well baby exam
- Call DCBS to report concern for abuse
- Send child to hospital for Head CT, Skeletal survey, CBC, PT, PTT, amylase, ALT, UA





FOLLOW-UP QUESTION?

- Is there anything else we need to do?
 - A. Yes
 - B. No
- If you answered “yes” – what?



TAKE-AWAYS....

- Consider abuse in *any child from any family* with *any injury when*:
 - Bruising in an infant less than 6 months old
 - The TEN/four rule is broken
 - Vomiting in absence of diarrhea, ALTE, rapidly increasing head circumference should all raise suspicion of abuse



WHOM TO CALL?

- In Fayette County:
 - Protection and Permanency
 - (859)245-5258
- **Child Protection Hot Line**
 - **(800)752-6200**
- If outside the county, may go to the following address:
 - https://apps.chfs.ky.gov/Office_Phone/index.aspx
- If you have questions and need further assistance please feel free to call UoL **Forensics Department (502)629-6000 (ask for Forensics clinician on call)**



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WEBSITES

- Child Help.
<http://www.childhelp.org/>
- Child Welfare Information Gateway.
<http://www.childwelfare.gov/>
- National Center on Shaken Baby Syndrome.
<http://www.dontshake.org/>
- Prevent Child Abuse Kentucky.
<http://www.pcaky.org/>





Be The Change

The cycle of child abuse can be broken, one family at a time, one parent at a time, one child at a time. If you need help, please find it (all the links above will point you to ways to get help). If you're aware of abuse, please report it.

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