Child Abuse Symposium 2018
10 minutes on Fractures

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Question

- 14 month old was walking and fell/tripped unwitnessed by report, has a fracture through their thigh bone (femur)
- 5 month old infant has an oblique/spiral fracture of their left arm (humerus)
- Are these likely abuse cases?
Abuse Fractures

• Specificity of the fracture(s)
• Mechanism (History)
• Biomechanics
• Age, Development, Medical History, other associations in exam/history
• Work-up
  – Exam and History
  – Skeletal Survey
  – Laboratory results
What is a Skeletal Survey?

Has other names: Bone survey, etc.

About 20 x-rays

Is used as a screening tool when abuse suspected

Usually in less than 2 year olds, sometimes up to 5

Might reveal fractures that are specific for abuse

Might reveal other fractures

Does not rule out abuse
“Take-home points” about Skeletal Surveys?

1) Screening tool for suspected abuse
2) They should be done and read by experienced pediatric radiologists
3) If positive, or if suspicion for abuse is high, repeat in two weeks
4) They don’t rule out abuse, have false positive and false negative.
5) Consultation with child abuse specialists is recommended
Other “Pearls” about Abuse Fractures

• Timing of injury possible in some long-bone fractures
• Often fractures are not accompanied by obvious pain, swelling or bruises
• When abuse is being considered, child abuse specialist review is recommended
• 5 month old with arm fracture
Summary

• Some fractures highly associated with abuse
• Understand mechanism, child’s development and medical history
• A child abuse medical evaluation should be considered
• Skeletal survey may be part of that work-up in infants and toddlers