



# Blunt Chest Trauma

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PGY-1

# Question #1

- A previously healthy 4y old male presents to the ER for reportedly having a large television fall on top of him. There is no reported LOC. His only current complaint is a sharp right sided chest pain.
- Vitals: T 37.8, HR 110, RR 33, BP 105/70
- On exam your only positive finding is tenderness to palpation diffusely over the right chest.



- What is the next best step in the management of this patient?
  - A) CT scan of chest
  - B) CXR
  - C) FAST scan of abdomen
  - D) EKG and cardiac echo
  - E) CT brain

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# Discussion

- Rib fracture is the most common chest wall injury in children. Therefore CXR is the best initial choice.
- Rib fractures can also cause a pneumothorax or hemothorax that may require emergent intervention if there is a tension pneumothorax or a large hemothorax.
- Due to increased cartilage content and a more compliant chest wall, more force is required for a chest wall injury in kids. They are more likely than adults to have pulmonary contusions without any fractures.



# Question #2

- A 6y old female sustained blunt chest trauma with a +LOC in a MVC where she was an unrestrained passenger. She was not ejected from the vehicle. What is the most likely cause of morbidity/mortality for this patient?

- A) Cardiac tamponade
- B) Aortic injury
- C) Hemothorax
- D) Traumatic brain injury
- E) Tension pneumothorax



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B) Aortic injury

C) Hemothorax

**D) Traumatic brain injury**

E) Tension pneumothorax



# Discussion

- High force impacts such as MVC's account for the vast majority of chest wall injuries in children, followed by falls.
- Due to the nature of these high force traumas, associated injuries such as traumatic brain injuries are common and may be life threatening.
- Another less common finding is flail chest, which may be seen on exam as paradoxical chest wall movement and can result from multiple rib fractures.



# References

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