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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A) CT scan of chest
B) **CXR**
C) FAST scan of abdomen
D) EKG and cardiac echo
E) CT brain
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
A) Cardiac tamponade
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


- Medscape, Blunt Chest Trauma, Author: Mary C Mancini, MD, PhD; Chief Editor: John Geibel, MD, DSc, MA. [http://emedicine.medscape.com/article/428723-overview#showall](http://emedicine.medscape.com/article/428723-overview#showall)