



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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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

- Kadish, Howard. Chest Wall Injuries in Young Children. UpToDate Online. Nov 15, 2010. http://www.uptodate.com/contents/chest-wall-injuries-in-children?source=search_result&search=blunt+chest+trauma&selectedTitle=2~87
- Mendez, Donna Reyes. Intrathoracic Injuries in Children. UpToDate Online. Aug 13, 2008. http://www.uptodate.com/contents/intrathoracic-injuries-in-children?source=search_result&search=blunt+chest+trauma&selectedTitle=7~87#H7
- Meller, Janet L., et al. Thoracic Trauma in Children. *Pediatrics* 1984;74;813.
- 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>