Trauma Case Review

East Baton Rouge Parish EMS

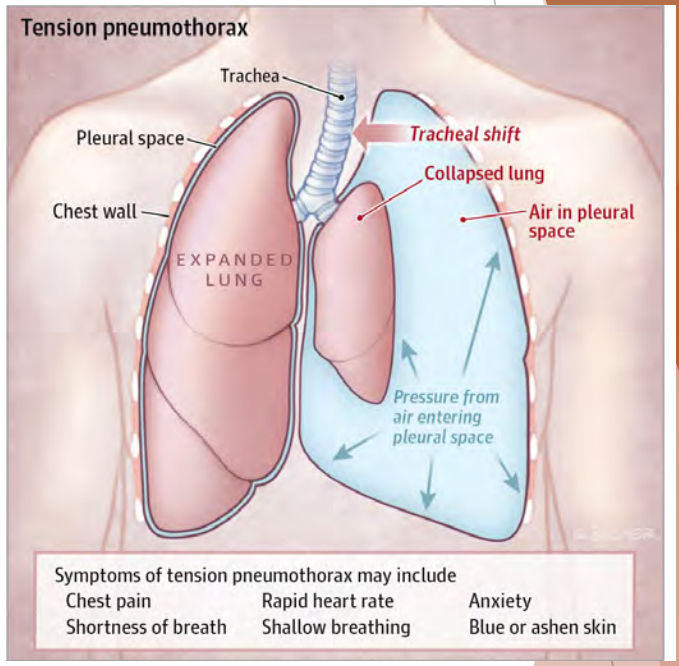
3801 Harding Blvd

Baton Rouge, LA 70807

Case info

Two similar cases where a Simple Thoracostomy was performed

- # 1 - Adult Female - Self inflicted GSW to center of chest
- # 2 - Adult Male – Multiple GSW to upper back and chest
- GCS - 15
- Vitals stable w/ complaint difficulty breathing
- Diminished breath sounds on left side



Imran JB, Eastman AL. Pneumothorax. *JAMA*. 2017;318(10):974. doi:10.1001/jama.2017.10476

Treatment

Initial

- O_2
- Chest Seal
- Simple (finger) Thoracostomy on Left Side
- Successful decompression w/ immediate improvement in respiratory effort
- TXA Infusion initiated on adult female

During Transport

Female patient began having progressive respiratory distress

- Finger sweep in thoracostomy site resulted in successful subsequent decompression
- Patient status immediately improved

Shlamovitz GZ. Tube thoracostomy: Medscape Reference. Available at: //emedicine.medscape.com/article/80678-overview. Accessed November 12, 2012.

Outcome

- Patients were delivered to the trauma center in stable condition.
- Adult female – 6 days w/ chest tube. Discharged on day 7
- Adult male – still in hospital 7 days out. Splenectomy, GI repair, diaphragm repair, bullet lodged in T2 resulting in LE paralysis.

Data

- Implemented new clinical guidelines on August 22

- Since then we have performed simple thoracostomy 20 times on 13 patients
  - 3 – GSW w/ pulse and positive outcome
  - 1 – Pedestrian struck w/o pulse
    - Regained pulses blood pressure
  - 1 – MVA w/o pulse
    - Regained pulses after ST procedure, subsequently lost pulse
  - 8 – w/o pulse, no change in outcome
    - 4 blunt trauma (MVA)
    - 4 penetrating trauma (GSW)

PEARLS

- Needle thoracostomy has a high failure rate (especially in LA)
  - No definitive assurance that you reached the pleural cavity
- Simple thoracostomy is easy to learn, perform, and is effective
  - High success rate
  - There's no question of whether or not you enter the pleural cavity
- Requires minimal equipment (scalpel, curved forceps, finger)
- Beneficial in traumatic arrests during initial field resuscitation attempts
  - May reduce mortality in survivable traumatic arrests due to blunt chest trauma
  - Performed in field vs delayed intervention at hospital after transport

Questions/Feedback?