Chest trauma

penetrating & blunt
Injuries to the Chest

- Open Chest Injuries
  - Caused by penetrating trauma
- Closed Chest Injuries
  - Caused by blunt trauma
Signs and Symptoms of Chest Injuries

- Pain at the site of injury
- Pain aggravated by increased breathing
- Dyspnea
- Hemoptysis
- Failure of the chest to expand normally
- Rapid, weak pulse and low blood pressure
- Cyanosis around the lips or fingernails
Assessment of Chest Injuries

- DCAP-BTLS
- Chest wall movement
- Paradoxical movement
- Hemoptysis
- Shock
- Cyanosis
Rib fracture

- Plueral chest pain
- A fractured rib may lacerate the surface of the lung.
- Patients will avoid taking deep breaths and breathing will be rapid and shallow
- May have contusion
- Often self splinted
Rib Fracture

TX

- high flow $O_2$
- position of comfort
Flail chest

- 3 or more ribs broken in 2 or more places
- Or when the sternum is fractured along with several ribs
- Free floating chest wall segment
- Paradoxical chest movement
- Dyspnea - poor tidal volume
TX

- High flow O2
- Immobilize flail segment
- Supine
- Rapid transport
- Maintain the airway.
- Provide respiratory support.
Pneumothorax

Air accumulates in the pleural space.

Air enters through a hole in the chest wall.

- The lung may collapse in a few seconds or a few hours.

- An open or penetrating wound to the chest is called a sucking chest wound.
S/S Pneumothorax

- dyspnea
- sharp chest pain
- unequal breath sounds
Care for Open Pneumothorax

- Clear and manage the airway.
- Provide oxygen.
- Seal an open wound with an occlusive dressing.
- Tape down all four sides or create a flutter valve.
- Watch for Tension Pneumothorax
Occlusive Dressing
Spontaneous Pneumothorax

Some people are born with or develop weak areas on the surface of the lungs.

Area can rupture spontaneously.

Suspect in cases of sudden chest pain with no cause.
Tension Pneumothorax - Causes

- Sealing all four sides of the dressing on a sucking chest wound.
- Fractured rib puncturing the lung or bronchus.
- Spontaneous pneumothorax.
S/S Tension pneumothorax

- Progressive dyspnea
- Absent/decreased lung sounds (1 side)
- JVD
- Tracheal shift
- Hypotension
- Tachycardia
RX

- High flow O2
- Rapid transport
- Unseal one side of occlusive dressing
Hemothorax

- Collection of blood in the pleural space
- S/S of shock
- Decreased breath sounds on affected side

*hemopneumothorax*
Cardiac Tamponade
AKA Pericardial Tamponade

- Blood in the pericardium.
  - Weak pulse
  - Hypotension
  - Narrow pulse pressure
  - Jugular vein distention (JVD)
  - Dyspnea with equal breath sounds

RX – High flow $O_2$ and rapid transport
Myocardial contusion

- Blunt Myocardial Injury
  - Chest pain
  - May have contusion over sternum
  - Irregular pulse

- RX
  - High flow O2
  - Rapid transport
Pulmonary Contusions

- Bruising of the lung
- Develops over hours
- Alveoli fill with blood
- Provide oxygen and ventilatory support.
Traumatic Asphyxia

- Sudden, severe compression of chest
- Results in JVD, cyanosis, and bleeding into the eyes
- Provide supplemental oxygen and monitor vital signs.
- Transport immediately.
Impaled objects

- Stabilize with bulky dressings
- Use manual stabilization PRN
- May remove if interfering with CPR
Laceration of the Great Vessels

- Superior/inferior vena cava, pulmonary arteries and veins, aorta

- Can cause fatal hemorrhaging

TX:

- CPR with BVM
- Transport immediately
Extra Credit Assignment

Read “Points to Ponder” Section at the end of Ch 27. Review the discussion question at the end of the scenario and prepare a response.

Worth up to 5 EC points depending on depth and appropriateness of answer. Due following class meeting. **Late submissions not accepted.**