PLEURAL DISEASES
Case 1

- Called to evaluate 76 year old in the ER
- Right pleural effusion
Case 1

• What three questions do you ideally want to know?
<table>
<thead>
<tr>
<th>Pleural Effusion</th>
<th>Infected</th>
<th>Not infected</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cancer</td>
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<td>Exp – mech pleurodesis Not exp – Why?</td>
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Case 2

• Called to evaluate patient in the ER
What is this?

• A pneumothorax?
• A space?
Pneumothorax: The presence of air in the pleural space with secondary lung collapse due to air escaping out of the lung

- Spontaneous
  - Primary
  - Secondary
- Traumatic
  - Blunt
  - Penetrating
- Iatrogenic
  - Inadvertant
  - Diagnostic
  - Therapeutic
Primary Spontaneous Pneumothorax

• Apical subpleural blebs
• 1-2/100,000, right sided predominance
• Bleb: <2cm subpleural collection of air contained within the visceral pleura (paraseptal emphysema)
• Bullae: large air filled spaces a/w any form of emphysema
• Elastolytic process
• Intraoperative findings
  – 30-40% normal lung
  – 12-15% adhesions without blebs
  – 28-41% blebs
  – 4-30% bullae
Secondary Pneumothorax

- Airway/parenchymal disease
  - COPD
  - Asthma
  - Cystic Fibrosis
- ILD
  - Pulmonary Fibrosis
  - Sarcoidosis
- Infectious
  - Mycobacterium
  - PCP
  - Bacterial
  - Parasitic, mycotic
- Neoplastic
  - Bronchogenic carcinoma
  - Metastatic (sarcoma)
- Catamenial
- Other
  - Marfan’s, EG, LAM, CVD, A1AT
Treatment Options for PTX

- Observation
- Aspiration
- Percutaneous catheter drainage
- Tube thoracostomy
- Pleural irritation
- Parenchymal resection
Small Device Options
Indications for Surgery

- Profession
- Access to medical care
- Persistent leak
- Tension PTX
- Bilateral PTXs
- Recurrent PTX
Apical Bulla
Apical Staple Resection
Mechanical Pleurodesis
Other possibility = SPACE

• Look for a cause
• Asthma?
• Trauma?
• Prior pulmonary resection?
• Perforated esophagus?
Last pleural space topic

• Malignancy
• Differential?
• Treatment?
CHEST WALL
Topics

- Trauma
- Pectus
- Thoracic Outlet
- Tumors
Trauma

• Rib fracture
  – When is it important? 2 situations
  – Management of each?
• Scapula fracture
• Clavicle fracture
• What is the most common source of morbidity and mortality?
Pectus

• Definition?

• Indications
  – Echo
  – PFTs

• Methods

• Success in adults versus children?
Thoracic Outlet

- Neurogenic versus vascular
- Tests
  - PE
  - Angio
  - EMG
- Treatment
Chest wall tumors

- **Soft tissue sarcoma**
- **Chondrosarcoma**
- **Osteosarcoma**
- **Plasmacytoma**
- **Ewings**
Chest wall tumors

• Soft tissue sarcoma → resect
• Chondrosarcoma
• Osteosarcoma
• Plasmacytoma
• Ewings
Chest wall tumors

- Soft tissue sarcoma
- Chondrosarcoma → resect
- Osteosarcoma
- Plasmacytoma
- Ewings
Chest wall tumors

- Soft tissue sarcoma
- Chondrosarcoma
- Osteosarcoma – preop chemo → surgery
- Plasmacytoma
- Ewings
Chest wall tumors

- Soft tissue sarcoma
- Chondrosarcoma
- Osteosarcoma
- Plasmacytoma $\rightarrow$ radiation
- Ewings
Chest wall tumors

- Soft tissue sarcoma
- Chondrosarcoma
- Osteosarcoma
- Plasmacytoma
- Ewings – remove entire rib!!
Questions?