Chylothorax

- **LYMPH IN PLEURAL CAVITY**

- **MOST COMMON CAUSE -- SURGICAL TRAUMA TO THORACIC DUCT**

- **UNILATERAL**
  
  RT SIDE MOST COMMON
  LT SIDE AFTER LT NECK DISSECTION
Causes

- **Congenital**: Atresia of thoracic duct, Thoracic pleural fistula Birth trauma
- **Traumatic**
  - Blunt
  - Penetrating injury
  - Surgery
- **Neoplasm**
- **Tuberculosis**
Pathophysiology

- Main function transport fat from GI system
- Milky & nonprulent
- Composition: fat (cholesterol), protein (albumin, globulin), lymphatic (lymphocytes)
- In injury up to 2 L/day
- Untreated depletion of protein & lymphocytes
- Analysis high lymphocyte count, triglyceride > 110mg/100 ml
Management

- Cause & amount of drainage, clinical status of pt
- Chest tube drainage, NPO, TPN & observation
- If > 500ml/day in adult, 100ml/day infant continue even after TPN
- Surgical rt thoracotomy, VATS (ligation of duct)
- Malignant condition radiotherapy, chemotherapy
- Untreated mortality 50% depletion of nutrition & immunity
Pneumothorax

- Presence of *air* in pleural cavity

- **Spontaneous** pneumothorax & **Traumatic** pneumothorax

- Spontaneous pneumothorax - rupture visceral layer without any trauma,
  - Primary spontaneous: without any cause,
  - Secondary spontaneous: Tuberculosis, Degenerative or cavitating lung disease, Necrosing tumor
Primary spontaneous pneumothorax

- Young people - mid teen to late 20s,
- Familial
- Leak from small bleb vesicles or bullae
- Symptoms: Sharp chest pain
  Breathlessness,
  Bleeding,
  Tension pneumothorax
- Treatment: No respiratory distress or hypoxia-no urgency self limiting
- Tension pneumothorax- urgent treatment
- Secondary spontaneous pneumothorax
  ICD & treat underlying pathology.
Traumatic Pneumothorax

- Air in pleural cavity due to trauma

- Usually associated with blood- haemopneumothorax

- Types:
  - Closed pneumothorax – small rent in lung due to trauma
  - Open pneumothorax - wound in chest wall
  - Tension pneumothorax - lacerated lung communicate with bronichal tree
    - Air enter in lung during inspiration not escape during expiration- valve
    - Lung collapse
    - Displace mediastinum to opposite side
    - Depress diaphragm
    - Compress opposite lung
Traumatic Pneumothorax

- Clinical feature: Dypnea, Pain, Shock, Cyanosis, Hyperresonance on percussion, Absent breath sound

- Shift of trachea & apex beat

- Treatment: Closed pneumothorax - small steadily absorbed
  If dyspnea evacuation by aspiration, ICD

  Open pneumothorax: Close wound in chest wall-dressing or suture

- Tension pneumothorax: Immediate intervention - Thick bore needle 2nd space, ICD
Haemothorax

- Traumatic haemothorax:
  Trauma to chest wall associated with blood & air in pleural cavity

- Blood from contusion lung, parietal vessels injury, heart & great vessels

- Symptoms of pneumothorax & pleural effusion

- Aspiration, ICD

- Thoracotomy: Bleeding continue > 200ml/h,
  ICD not clearing blood,
  Infected haemothorax- decortication
Flail chest

- Multiple rib fracture: Anteriorly at or near costochondral junction
  Posteriorly near angle of ribs

- Floating segment:
  Move in during inspiration & move out during expiration—paradoxical respiration
  Accumulation of CO₂

- Three type lateral, anterior & posterior

- Pain, Hypoxia, accumulation of bronchopulmonary secretion

- Intubation, ICD, Positive pressure ventilation

- Tracheostomy

- Padding & stripping

- External fixation
Surgical Emphysema

- Means **air in subcutaneous tissue**
- Injury underlying lung – air comes out in muscles & sc tissue.
- Injury to bronchus or oesophagus – emphysema in neck
- Bruising skin, crepitus, resonant note, absence of breath sound
- X-ray - # ribs, presence of air in soft tissue, pneumothorax
- Treatment: Small surgical emphysema -- No intervention, ICD