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 (cholestrol)
  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,
  Degenrative 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 : Dyponea
  Pain
  Shock
  Cyanosis
  Hyperresonance on percussion
  Absent breath sound

- Shift of trachea & apex beat

- Treatment- Closed pneumothorax - small steadily absorbed
  If dysponea 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 CO_2

- Three type lateral, anterior & posterior

- Pain, Hypoxia, accumulation of bronchopulmonary secretion

- Intubation, ICD, Positive pressure ventillation

- 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