

Acute respiratory distress syndrome

- Severe, life threatening , progressive respiratory insufficiency, involving lungs diffusely
- ARDS-Two forms
 - 1 Neonatal
 - 2 Adult

Neonatal ARDS (HMD)

- In new born infants within few hours after birth

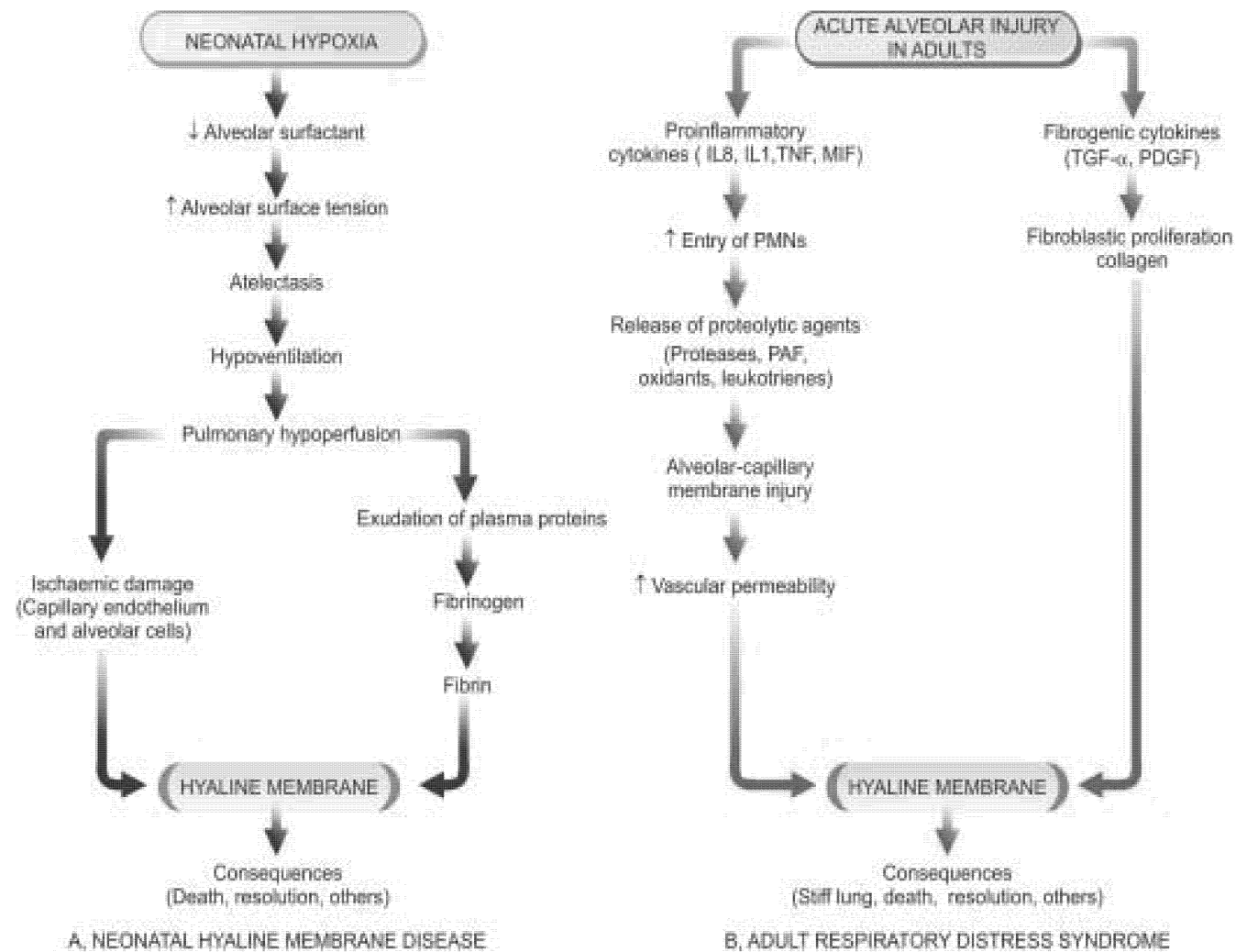
Dyspnoea

- Tachypnoea
- Hypoxia
- Cyanosis

Fatal in severe cases

- **Aetiology:** Hypoxia shortly before birth or immediately after it
- Preterm infants
- Infants born to diabetic mothers
- Delivery by LSCS
- Previous history of delivery of ARDS infants
- Excessive sedation of mother
- Birth asphyxia ie umbilical cord around neck
- More common in Males 1.5 to 2 times
- Idiopathic

- **Pathogenesis:** Damage to alveolocapillary wall
- Entry of air must for formation of hyaline membrane



- **Morphologic features:**

Gross/Exam: Lungs normal in size, stiff, congested, heavy and airless(sink in water)

M/E:

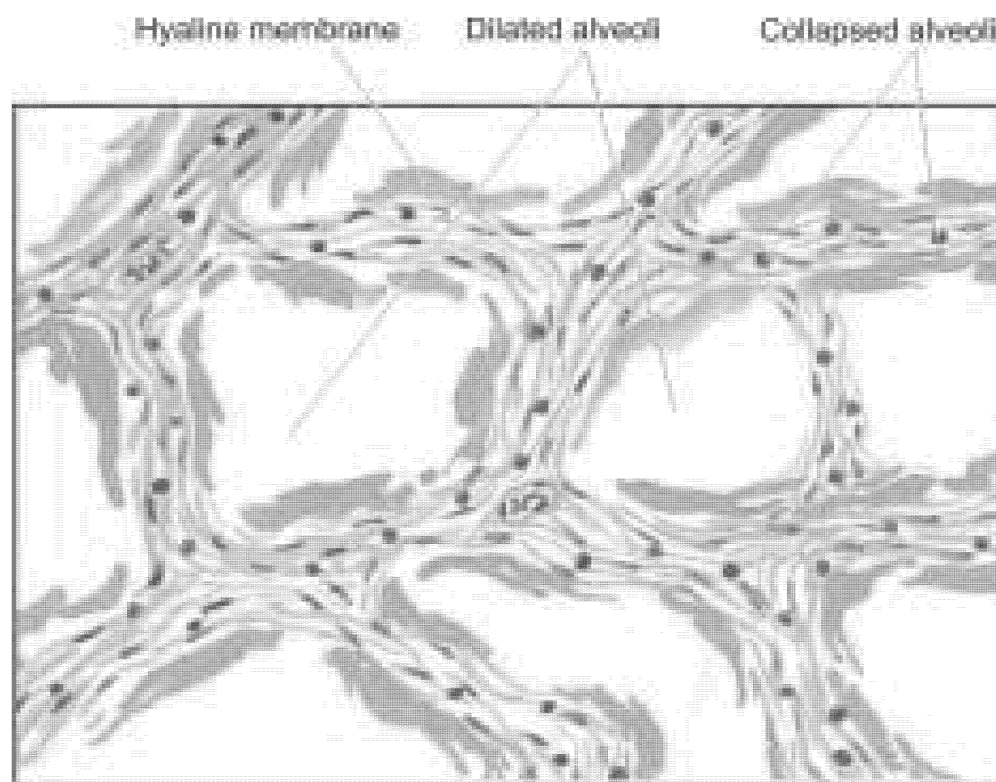
Collapsed alveoli alternating with dilated alveoli

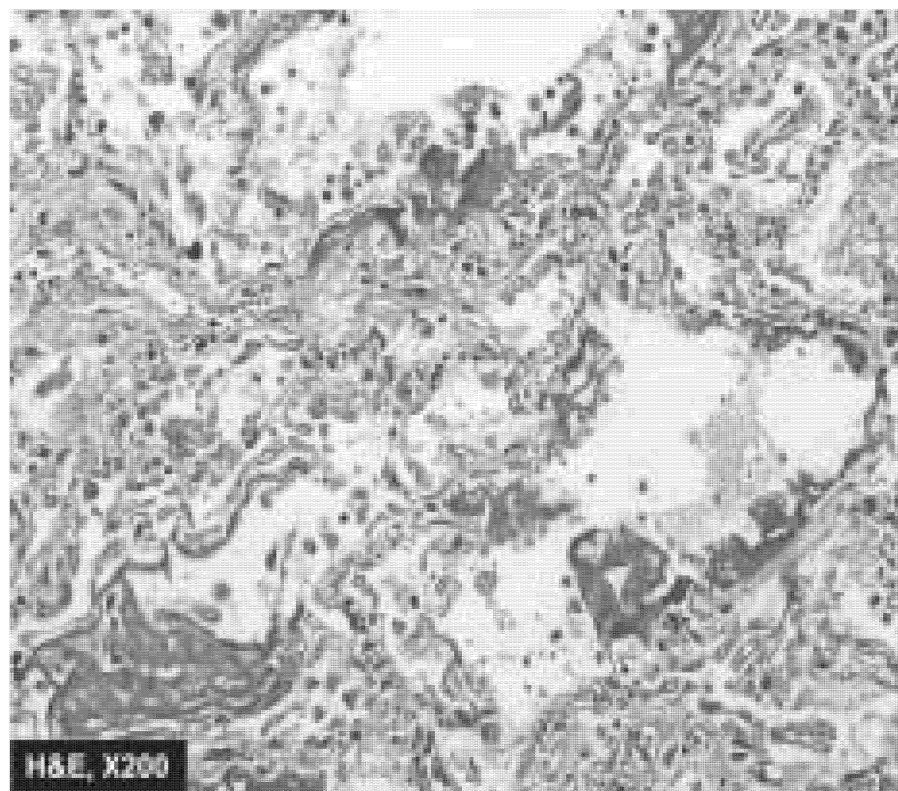
Necrosis of alveolar epithelial cells with formation of eosinophilic hyaline membrane

Interstitial, intra-alveolar oedema, congestion, intra-alveolar hemorrhages

Changes of bronchopneumonia

With time proliferation of pneumocytes in alveolar lumen





Adult ARDS

- First recognised during world war II in survivors of non-thoracic injuries with shock
- Shock lung syndrome/diffuse alveolar damage/acute alveolar injury/traumatic wet lung

Clinically presents:

- Sudden & severe respiratory distress, tachypnoea, tachycardia, cyanosis & severe hypoxaemia

- **Aetiology:**
- Shock due to sepsis, trauma, burns
- Viral pneumonia
- Pancreatitis
- Oxygen toxicity
- Inhalation of toxins and gases
- Narcotic overdose
- Drugs ie salicylates, colchicine
- Aspiration pneumonitis
- Fat embolism
- Radiation

ARDS (complications)

- **Death-** Mortality high 20-30%
- **Resolution-** Milder cases of neonatal ARDS recover with adequate oxygen therapy. HMD liquefied by neutrophils and macrophages
- **Others:** Bronchopulmonary dysplasia, Desquamative interstitial pneumonia, Diffuse fibrosing alveolitis