

Restrictive Lung Diseases (of the interstitial)

ADULT RESPIRATORY DISTRESS SYNDROME (ARDS)

Diffuse alveolar damage →
leakage of protein-rich fluid
into alveoli

Formation of intra alveolar
hyaline membrane

Severe hypoxia

Causes :

Shock, sepsis, trauma,
uremia, aspiration of gastric
contents, acute

pancreatitis. inhalation

chlorine, oxygen

toxicity or overdose heroin

or **bleomycin**.

Severe acute respiratory

syndrome (SARS) virus.

Pathogenetic factors:

Neutrophils release toxic

Activation of the coagulation

cascade → microemboli

Oxygen toxicity → free

radicals.

NEONATAL RESPIRATORY DISTRESS SYNDROME (HYALINE MEMBRANE DISEASE)

Symptoms:

Dyspnea, cyanosis and
tachypnea shortly after birth.

Cause :

Prematurity → deficiency of
surfactant

Maternal diabetes mellitus and
delivery by cesarean section.

Silicosis

Silica dust in glass
manufacturers and stone
cutters, sand.

Inflammatory response
mediated by lysosomal
enzymes

Can cause :

Silicotic nodules → obstruct the
airways and blood vessels.

Silicotuberculosis.

Pneumoconioses

(A) Acanthracosis

Irregular black
patches visible on
gross inspection
(cause no harm)

(B) Coal worker's pneumoconiosis

coal dust → carbon
and silica

(1) Progressive massive fibrosis

Filled with necrotic black fluid. It can
result in bronchiectasis, pulmonary
hypertension, or death from respiratory
failure or right-sided heart

(2) Simple → coal macules

No fibrosis

Asbestosis (ship builders)

Asbestos fibers fibroblastic response release fibroblast-stimulation
growth factors by macrophages → diffuse interstitial fibrosis mainly
in the lower lobes.

Characterized by:

Ferruginous bodies (yellow-
brown) stain : Prussian blue.

Dense hyalinized fibrocalcific
plaques of the parietal pleura

Complication:

Bronchogenic carcinoma and
to malignant mesothelioma