XVI. Diseases of the Respiratory System

N.B. 2. Congenital anomalies of the lung

1. *Abnormal fissures (absence, extra or abnormal),*
2. *Abnormal lobes.*
3. Sequestration segment (associated with cystic disease).
4. Abnormal bronchi (decrease, increase or variations in distribution).
5. Congenital cystic disease which may lead to accumulation of secretion, secondary infection and rupture.

- A true congenital cystic lung may occur **alone or in association with cystic diseases of other organs.**
- **Pulmonary cystic lesions** appear in the foetus or may show themselves at birth, after birth or at any later age.
- The commonest form is a **cystic dilatation of bronchi.**
- This is developmental (not degenerative) in origin and tends to affect upper and middle portions rather than bases and lower parts of lungs.
- It is a rare disease; mostly children; the lung is occupied by cysts of varying sizes (lined by epithelium; cubical and ciliated or flattened).
- The cysts may be single or multiple and small or large.
- The neighbouring and adjacent bronchi are normal (whereas in bronchiectasis they are deformed, dilated and infected resulting in severe attacks of dyspnea and cyanosis).
- The disease may lead to spontaneous pneumothorax.
- There may be marked pulmonary hypertension as a result of vascular occlusion.

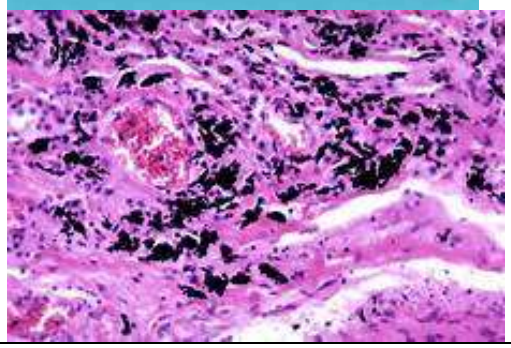
Anthracosis	***4-6.9411***				
Lung:	• Voluminous (large) • Firm in consistence (slightly) • Emphysematous at the apex • Shows marked pigmentation				
	Cut surface:	A uniformly-congested pigmented surface forms a back ground *With a dark black network*			
The pigment :	***Carbon particles*** Black in colour				
	Deposited as a network at:	Anatomical lobules			

		Septal lymphatics Subpleural		
Lymph nodes (bronchial):		Enlarged (slightly) <u>Pigmented</u> Black		

N.B.I:

- Of all the dust diseases of the lung, **anthracosis is the commonest but the least harmful**.
- It does not predispose to tuberculosis or to cancer.
- In very severe cases, it may occasionally **produce fibrosis which is rather little**.

Figure 95
Nature
Anthracosis (lung)
Specimen No II-6.9411
Reference P. 192



N.B,
Pneumoconiosis (dust-diseases):

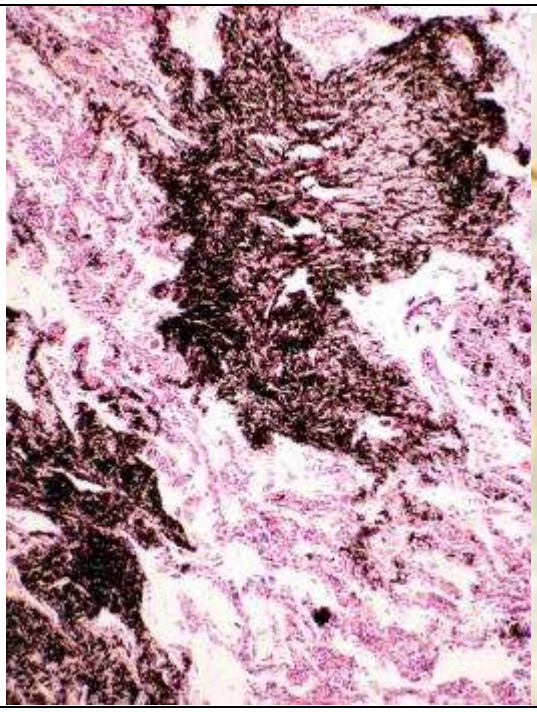
- The effects of inhalation of dust **depend on the character of particles.**
- The fine simple dust of air which is not expectorated, is carried from lung into lymphatics, and is deposited in various situations without necessarily producing any damage.
- **If the dust is irritating, it causes reactive changes.**
- According to the nature of the dust inhaled, various names have been given depending on the lesions produced.

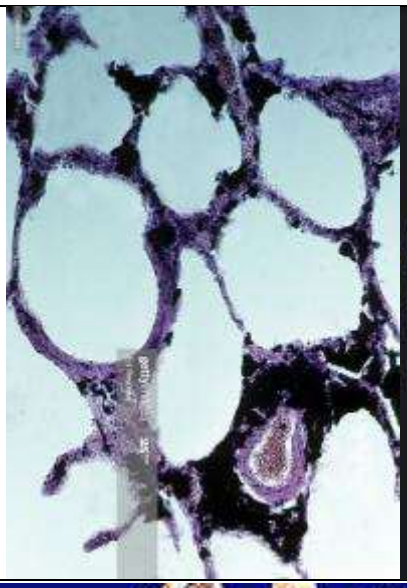
- **Dust diseases are usually**
  - **Occupational diseases,**
  - **Are gradual in onset**
  - **With early little clinical manifestations,**
  - **Then great disability**
  - **And definite clinical**
  - **And radiological phenomena.**
- **Diseases which result from long continued inhalation of certain irritating dusts, may cause chronic interstitial pneumonia are termed "dust-inhalation diseases and known as "pneumonoconiosis".**
- These diseases are on the increase with progressive increase in industrial civilization.

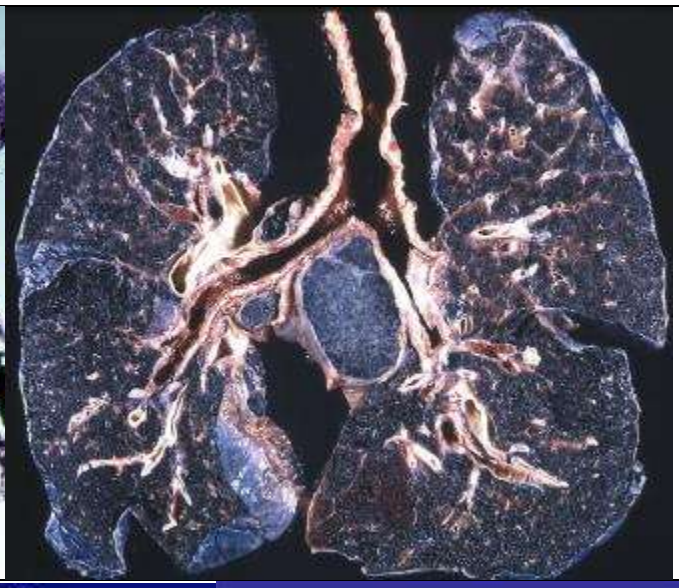
Types:

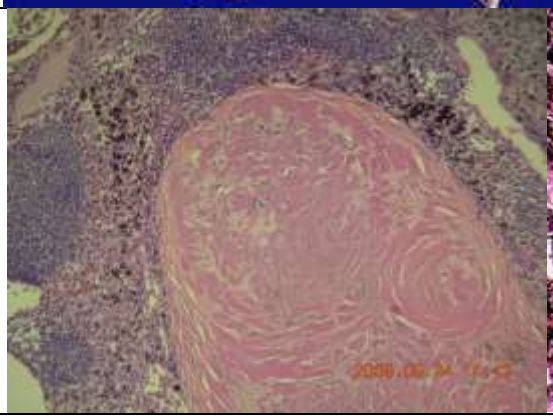
- ***Silicosis,***
- ***Asbestosis,***
- ***Anthracosis,***
- ***Silico-anthracosis,***
- ***Sidero-silicosis.***

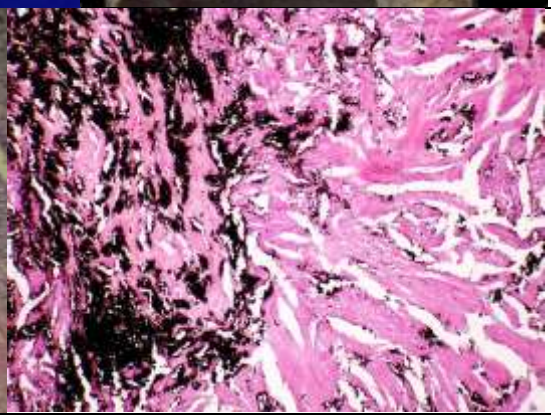
- In old-standing cases of pronounced pneumoconiosis, the lesions may be distributed not only in the lung, but in other situations and organs such as :
  1. ***Dust particles in bronchial, mediastinal and distant lymph nodes →greyish black pigmentation.***
  2. ***Lymphatics of epicardium and diaphragm.***
- Liver, spleen and bone marrow. →This so-called "metastatic distribution" (which is a bad term), is simply due to rupture of a blocked pigmented lymph node into a blood vessel.







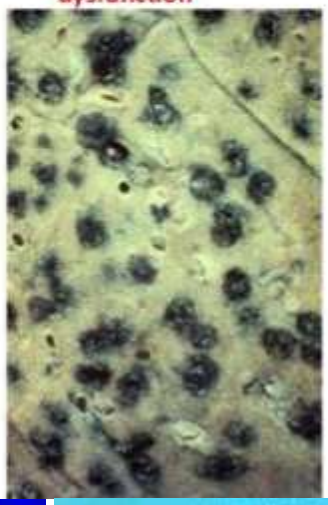




THE SPECTRUM

Asymptomatic anthracosis

Simple CWP with little to no pulmonary dysfunction



Complicated CWP, or progressive massive fibrosis (PMF), in which lung function is compromised