

XVI. Diseases of the Respiratory System

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N.B.:

- The tuberculous cavity is commoner in the **right lung at the apex or just subapical**.
- This may be attributed to the recumbent position during sleep on the right side.
- A possible factor is the **more direct continuation of the right bronchus from the trachea**.
- Further factors are probably the
- **Low pulmonary arterial pressure at the apex and**
- **The differences in the structure (and extent) of lymphoid tissue at the apex of the lung.**
- Tuberculous, lesions are usually discrete and not diffuse (at least at first).

In fibrocaceous tuberculosis, the causes of cavity-formation are:

- (1) **Caseation, softening and liquefaction of caseous tissue;**
- (2) Then its discharge through a neighbouring bronchus which has communicated with the softened material;
- (3) **Bronchiectasis in this related bronchus** (the tuberculous process destroying the bronchial wall which will be weakened by fibrous tissue replacing elastic and muscle tissues, so it will dilate).
- (4) The **elastic outward pull on the area of softening;**
- (5) **Conglomeration of the neighbouring and surrounding soft tubercles** so enlarging the size of the cavity;
- (6) Communication of the cavity with the exterior (through the bronchi) and effect of the passage of air in and out of the cavity.

- The softened tissue is discharged into a bronchus and is coughed out in the sputum → **open tuberculosis**.
- **The first cavities are formed at the apex and are always the largest.**
- Sometimes other cavities smaller in size may form in the lower lobe.
- When the cavity first forms, **its wall is made up of caseous material** surrounded by an area where alveoli contain tuberculous exudate.
- If there is no resistance and the process is rapid, some of the blood vessels at this area may **have no time to undergo endarteritis obliterans** and a **small vessel may be destroyed** and when **ruptured it leads to haemorrhage**.
- Usually, a chronic cavity results and it is rather big, with comparatively **smooth fibrous tissue** wall which is due to scarring.
- The cavity may show some irregularity due to bands crossing it (occluded blood vessels and remains of bronchi).
- **The contents of the cavity are usually not putrid.**
- There is **liability again to haemorrhage**, if one of the unsupported blood vessels shows signs of aneurismal formation and ruptures.



Fibrocaseous Tuberculosis (chronic)			
Lung:	Is cut longitudinally Shows lobular and acinar bronchopneumonia Consolidation is more at upper lobe Is glazed in appearance With dark red haemorrhagic patches Apex: Shows a cavity		
The cavity:	Large Chronic Tuberculous		
Pleura:	Thick Greyish-white Shows fibrous tissue adhesions		
Lymph nodes (hilar):	Enlarged (slightly)		
	<p>Cavitory Secondary TB</p>		



Figure 84
Nature
Fibrocaceous Tuberculosis
(re-infection;
chronic cavitation; lung)
Specimen No. II-6.3315 **Reference**
P. 179



Figure 85
Nature
Acute Caseous Pneumonia
Specimen No. II-6.3316
Reference P. 183