Tuberculosis:

- It is the chronic infectious disease.
- caused by Mycobacterium Tuberculosis.
- Mainly affected by Human strain and less commonly by bovine strain due to availability of pasteurization of milk.
- It affect any part but mainly lung.

Structure:

- Slender rod shaped
- Need oxygen to survive (Aerobes).
- Waxy cell wall (Acid fast).
- Hard wall which survive infection.

Epidemiology:

- In India TB is the main cause of the disease so National Tuberculosis control programm has been made to reduce the risk.

Pathogenesis:

Transmission → Droplet Infection (TB)
↓
Alevolar macrophage
↓
Proliferate and produce Infection
↓ after 3 weeks:
Cell mediated immunity produce (Granulomas (wall of bacteria)).
↓
Caseous Necrosis + Hilar lymph Nodes
↓
Fibrosis and Calcification.

Primary TB → Asymptomatic
→ Flue like Symptoms

Caseous focus → Caseous Necrosis + Hilar lymph Nodes
Caseous Complex (usually Lower lobe)

Ranke Complex:

TB Pleurisy
Viable (Latent)

Viable TB (Post Pulmonary TB)

↓ Immunocompromised like AIDS or aging.

Spreads to upper lobes. (CO_2).

↓

Memory T cells release cytokines.

↳ Caseous necrosis → Cavities

↓

TB disseminates

Lungs → Bronchopneumonia

a vascular system → Systemic military TB.

Clinical features:

- Evening rise in temperature
- Loss of appetite
- Night sweats
- Loss of weight.
- Haemoptysis with cough.
- Allergic manifestation like Phlyctenular Conjunctivitis and Erythema Nodosum in front of tibia.

→ It spares nails and hair

RS → Upper part of middle lobe.

- Cough with hemoptysis, kyphosis, hoarseness.

Lymphadenitis

→ Cold abscess → Sinus → Collar stud abscess.

Potts Disease

lumbar vertebrae

→ Spine → Psoas abscess

Intestinal TB → Unpasteurized Milk

→ Malaise

→ Malabsorption Syndrome,

→ Nausea, Vomiting, Constipation

Meninges → Encephalitis. Tuberculum → projectile vomiting

Kidney → sterile pyuria → WBC in urine.

liver → Hepatitis.

Adrenal glands → Addisons disease

Female Genital tract → PID, Infertility

Skin → lupus vulgaris.

Investigations: NAAT

- Tuberculin or Mantoux Test → positive → Comm with induration.
- Interferon gamma release assay → Evidence in Blood
- Stain → Ziehl Neelsen: sputum
- Culture → Lowenstein - Jensen
- FNAC
- Bronchoscopy
- Tissue biopsy
- Fluid aspiration.
- chest x-ray. MRI, USG, CT.
  - opacities
- ESR, polymerase chain reaction

Complications:

- Pneumothorax, Pleural effusion. Empyema, Fibrosis, Cor pulmonale. Bronchiectasis, Secondary Infection.

Differential diagnosis:

- Bronchiectasis, pneumonia, lung abscess, Carcinoma.

Management:

- National Tuberculosis Control Programme.
- DOTS → Direct observed Treatment shortcourse
- BCG vaccination. First line & Second line drug