

Leprosy

causative agent - *Mycobacterium leprae*.

Clinical manifestation - chronic granulomatous disease

IP - 5-7 years

Paucibacillary leprosy - 1-5 skin lesion
- no nerve involvement
- slit skin smear -ve for lepra bacilli

} all criteria

Multibacillary leprosy - >5 skin lesion
- neuritis
- slit skin smear +ve for lepra bacilli

} any 1

Lepromatous leprosy - multibacillary
bacteriological index 4-6+

skin lesion - many, symmetrical & irregular margin
superficial nodulate lesions
lepromata, plaque, xanthoma like papules

nerve lesion - very late

EMI - Impaired
lepromin test -ve

Humoral immunity - exaggerated.

→ invade nasal mucosa.
shed in large numbers in nasal secretions

eye, reticuloendothelial cells, testis, kidneys.
bones are affected except CNS, lungs

poor prognosis

Tuberculoid leprosy paucibacillary
bacteriological index 0-1+

skin lesion - few, asymmetric, sharply demarcated
hypopigmented, annular macules

nerve lesion early.
enlarged, thickened nerve axons.
ulnar nerve > post-auricular nerve

CMI - normal
lepromin test +ve

humoral immunity - normal
→ least infectious
good prognosis.

Borderline leprosy, pure neuritic, intermediate type
bacteriologically -ve

Immunity - Innate immunity
CMI - major role (intracellular bacilli)
CMI ↓ → LL
CMI ✓ → TL

humoral minor role

LL → ↑ T_H2 → ↑ Ab

Complication -

Deformities
nerve injury

↓
muscle weakness

- claw hand
- wrist drop
- foot drop
- claw feet

leonine facies, loss of eyebrow/eyelashes
corneal opacities, saddle nose.

Lepna Reaction

Severe allergic acute exacerbations

<u>Type I</u>	<u>Type II</u>
◦ Type IV HS	Type III HS
◦ Borderline leprosy	BL, LL
◦ inflammation of previous lesion. new skin lesion neuritis	erupts of painful papules ↓ nodule ENL
◦ before treatment ↓ progress towards LL after treatment ↓ towards TL	◦ occurs at start of chemotherapy
◦ TH1 → ↑IFN- γ , IL-2	TH2 → ↑IL-1, IL-8 TNF- α
X	eyes, testes, kidney affected
glucocorticoid	glucocorticoid. thalidomide, clofazimine

Smear microscopy

6 sample → 4 from skin - forehead
cheek
chin
buttock

1 ear lobe

1 nasal mucosa

slit skin smear technique

acid fast bacilli

↳ globi