PRESENTER - Dr. Dhavamugi

MODERATOR: Dr. Mary Lilly

Tuberculosis Summary

Chronic infectious disease caused mainly by Mycobacterium tuberculosis. Spread via aerosols. Primarily affects lungs but can be systemic.

Causative Mycobacteria

M. tuberculosis – Human TB.
M. bovis – Cows, unpasteurized milk (intestinal TB).
M. leprae – Leprosy.
Atypical: M. avium, M. kansasii, M. scrofulaceum (in AIDS patients).

Risk Factors

Poverty, crowding, AIDS, diabetes, malnutrition, Hodgkin lymphoma, unpasteurized milk.

Pathogenesis

1. Entry Replication in macrophages.
2. Activation of TLR2.
3. Th1 response (via IL-12, IFN-γ).
4. Macrophage activation (Phagolysosome fusion, ROS, NO, Autophagy, Defensins).
5. Granuloma formation tissue damage.

Types of TB

Primary TB: First infection, GHON Focus, GHON Complex, No cavitation.
Secondary TB: Reactivation, affects lung apex, cavitation present.
Progressive Pulmonary TB: Elderly/immunocompromised, erosion cavities hemoptysis.
Miliary TB: Hematogenous spread, tiny lesions in multiple organs.

Named Lesions

Simon's focus – Apical nodule from prior TB.
Rich's focus – Brain cortex granuloma.
Weigert's focus – Pulmonary vein.

Ranke complex – Healed GHON complex.
Assman lesion – Infraclavicular lesion.

Clinical Features

Malaise, weight loss, night sweats, low-grade fever, hemoptysis, chest pain.

Lab Diagnosis

Active TB: AFB stain (ZN), Culture, CBNAAT/GeneXpert.
Latent TB: Tuberculin (Mantoux), IGRA (QuantiFERON-TB Gold).

Extrapulmonary TB

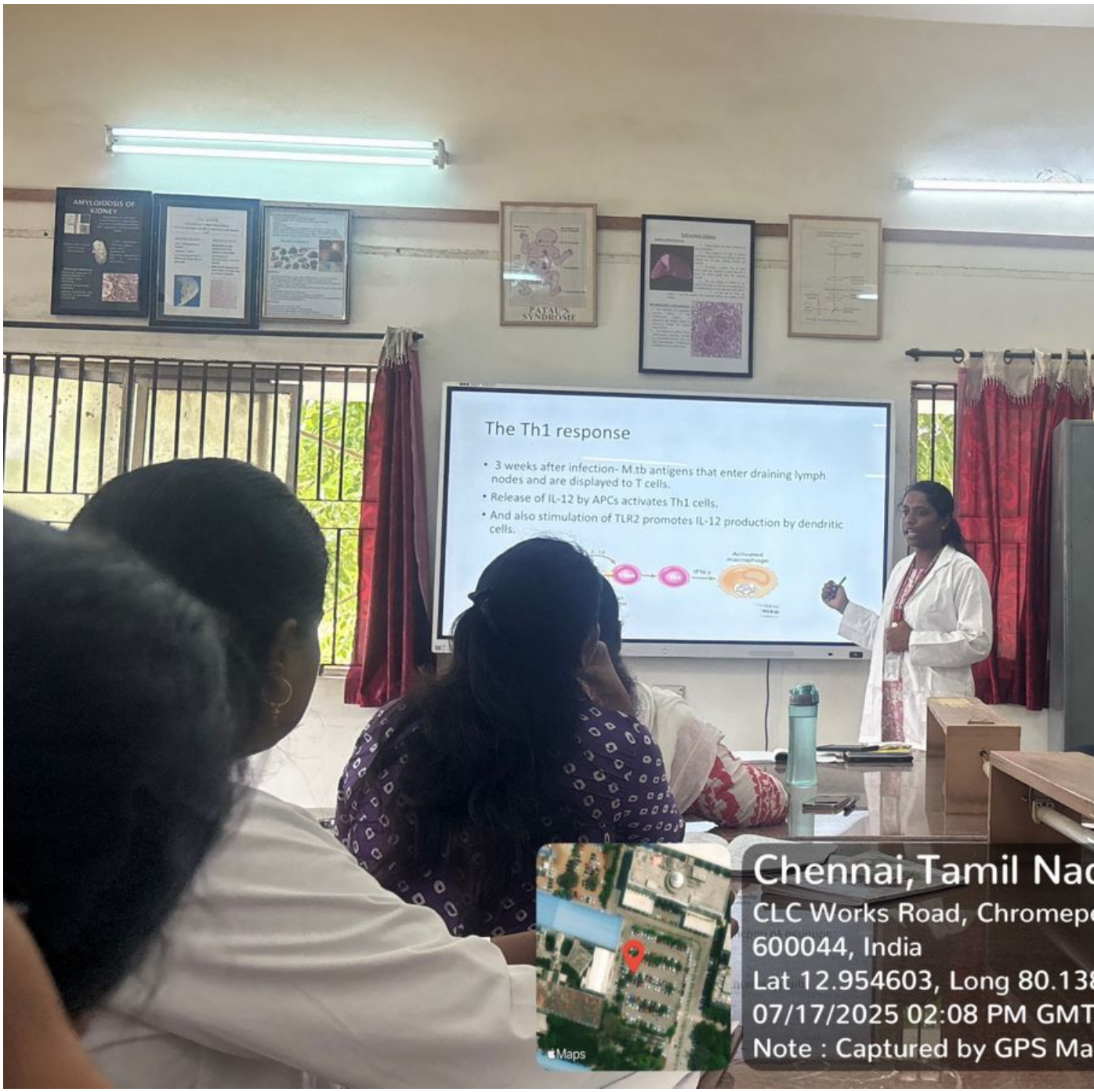
Lymph nodes (scrofula), intestine, meninges, eye, pleura, pericardium, bones (Pott's), adrenals (Addison's), fallopian tubes, kidney, skin.

Atypical Mycobacteria

Seen in AIDS/immunocompromised. MAC, M. kansasii, M. xenopi. Hot tub lung = hypersensitivity pneumonitis.

HIV and TB (CD4 Count)

CD4 >300–500: Typical cavitary TB (lung apex)
CD4 <200: Atypical, extrapulmonary TB
CD4 <50–100: Miliary TB, poor granuloma formation, numerous AFB


AMYLOIDOSIS OF KIDNEY
PATAU'S SYNDROME
The Th1 response
• 3 weeks after infection- M.tb antigens that enter draining lymph nodes and are displayed to T cells.
• Release of IL-12 by APCs activates Th1 cells.
• And also stimulation of TLR2 promotes IL-12 production by dendritic cells.
Maps
Chennai, Tamil Nad
CLC Works Road, Chromepe
600044, India
Lat 12.954603, Long 80.138
07/17/2025 02:08 PM GMT
Note : Captured by GPS Ma