__/__/____

MEMBRANOUS NEPHROPATHY: – seen in elderly people

– Uniform diffuse thickening of the glomerular capillary wall.

↓

due to Accumulation of electron dense deposit of Ag-Ab complex Along the subepithecl side of GBM.

– chronic immune complex mediated disease.

CAUSE: 1° / 2°

⇒ 1° → Anti phospholipase A_2 Receptor. Autoantibodies.

⇒ 2° → Infection: cheonic hepatitis B, C, syphilis.

SLE, RA, MG

Drug: penicillamine, captopril, NSAIDs.

PATHOGENSIS:

Auto Antibody. Result in the in-situ formation of immune complex:

Complement Activation (C5b-C9)

↓ (MAC) play imp Role

Activate glomerular epithelial & mesangial cell

↓

Release of oxidants

↓

Capillary wall Injury.

↓

↑ protein leakage

__/__/__

HORMOLOGY:

Light Microscopy:

① Glomeruli: Uniform, diffuse thickening of capillary wall
Normocellular glomeruli
special stain - silver stain (Bleeb)
PAS (purple) HE6
Show SPIKES in all glomeruli b/w the deposits of the immune complexes on the epithelial side of GBM

② TUBULES: epithelial cells of PT show droplet of Reabsorbed protein

Electron microscopy:

- Thickening of glomeruli capillary wall:
due to irregular electron-dense deposit of immune complexes
↓
They show effaced foot process:
(SPIKE AND DOME PATTERN:) in b/w the immune deposits the Basement membrane is laid down
- irregular spikes protruding from the GBM.

Stage 1 - Capillary wall are normal
Stage 2 - Projection of GBM material around dense deposits
Stage 3 - BM encircles the deposits laid over immune complex
Stage IV - deposits undergo degradation of lysis leaving cavities within the GBM.

Immunofluorescence Microscopy:

granular deposit of both immunoglobulin IgG of C3 complement in sub epithelial surface