QUIZ 25-08-2025-MGRS

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All the statements reg ultrastructural lesions in MGRS are true except

- A. Immunotactoid nephropathy shows microtubular deposits
- B. Crystalline inclusions in podocytes are seen in light chain crystalline podocytopathy
- C. MGRS lesions with no deposits can be seen in poems syndrome
- D. MGRS lesions with non organised deposits are seen in cryoglobulineemia



ANSWER C

- •Immunotactoid glomerulopathy (ITG) is characterized by:
 - •Organized microtubular deposits (typically >30 nm in diameter).
 - •Composed of monoclonal immunoglobulins, often IgG.
 - •Seen on electron microscopy (EM).
 - •These differ from fibrillary glomerulonephritis (FGN), which has randomly arranged fibrils <30 nm
- •Light chain crystalline podocytopathy is a rare form of MGRS.
 - •Crystalline inclusions composed of monoclonal light chains, often κ (kappa), within podocytes and PCT.
 - •These crystals are visible on EM and can be PAS-positive in light microscopy.



Cryoglobulinemia can CAUSE MGRS.

- •In cryoglobulinemic glomerulonephritis, deposits are typically:
 - •Organized in the form of microtubules or curved filaments, especially in type I.
 - •Often seen in subendothelial and mesangial areas.
- •Renal lesions in POEMS may include:
 - •Glomerular endothelial injury, mesangiolysis, and microangiopathy-like changes.
 - •MGRS lesions without deposits can occur in POEMS



2. QUESTION

- A 58-year-old woman presents with progressive fatigue, edema, and proteinuria (3.8 g/day). Her serum creatinine is 2.1 mg/dl (baseline 1.0), and urinalysis reveals dysmorphic rbcs. No overt signs of myeloma are present. Serum protein electrophoresis is unremarkable, but serum free light chain assay reveals an elevated κ/λ ratio (3.6). Renal biopsy shows nodular glomerulosclerosis with linear glomerular basement membrane staining for monoclonal igg3- κ on immunofluorescence. Electron microscopy shows granular, non-organized electron-dense deposits along GBM and TBM.
- Bone marrow biopsy reveals 5% clonal plasma cells.

Which of the following is the most appropriate next step in management?

- A. Initiate bortezomib-based clone-directed therapy targeting plasma cell dyscrasia
- B. Begin treatment with rituximab monotherapy targeting presumed b-cell clone
- C. Observation with close monitoring as the plasma cell burden is below 10%
- D. Repeat kidney biopsy to confirm findings with mass spectrometry

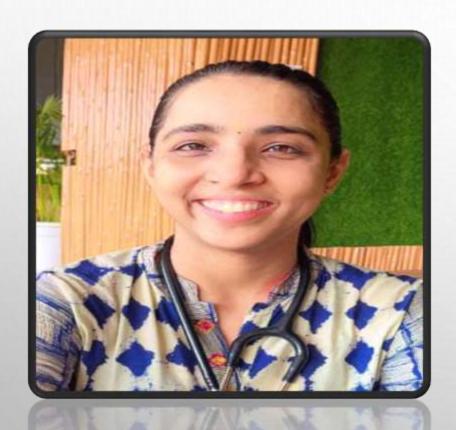


ANSWER B

- •<10% plasma cells in bone marrow rules out myeloma, but since there's progressive renal damage, this is MGRS,
- •Since the deposit is $lgG3-\kappa$, it's likely from a plasma cell clone \rightarrow use bortezomib-based therapy (e.g., CyBorD)
- •Rituximab would be appropriate for B-cell-driven MGRS (e.g., IgM deposits), not plasma cell clones
- •Observation is inappropriate progressive renal disease is already occurring
- •Mass spectrometry may help in ambiguous or amyloid cases, but diagnosis is already clear from IF and EM



WINNER



- Third year DrNB resident
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Congratulations



THANK YOU