Quiz -23-06-2025

Onco-Nephrology

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- 58-year-old male with metastatic lung cancer on chemotherapy presents with:
- - Polyuria, proximal muscle weakness, bone pain
- - Lab findings:
    - Normoglycemic glycosuria
    - Hypophosphatemia, hypokalemia
    - Normal anion gap metabolic acidosis
    - Aminoaciduria

Which of the following chemotherapeutic agents is LEAST likely to cause this?

A. Ifosfamide

B. Cisplatin

C. Pemetrexed

E. Methotrexate

Correct Answer

- ✓ d. Methotrexate
- Clinical features point towards acquired fanconis syndrome.
- Methotrexate is not typically associated with Fanconi syndrome.
- Others have documented proximal tubular toxicity.

- Ifosfamide: Common cause (especially in pediatric oncology)
- Cisplatin: Dose-dependent proximal tubulopathy
- Pemetrexed: Rare reports of Fanconi-like syndrome
- Methotrexate: Causes AKI, not Fanconi syndrome

Winner

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- 55-year-old man with NSCLC on pembrolizumab, pemetrexed, and carboplatin.
- After 5 cycles: new-onset edema, proteinuria, elevated creatinine.
- ANA positive (1:160), dsDNA negative, normal complements.
- Kidney biopsy: Full-house IF (IgG, IgA, IgM, C3, C1q), subepithelial deposits.

Which of the following is the most likely etiology of this patient's renal lesion?

A. Pembrolizumab

B. Pemetrexed

C. Carboplatin

D. Paraneoplastic glomerulopathy

Correct Answer

- ✓ A. Lupus-like glomerulonephritis due to pembrolizumab

- - Immune checkpoint inhibitors (ICIs) like pembrolizumab can trigger autoimmune renal syndromes.
- - Full-house immunofluorescence in biopsy supports lupus-like GN.
- - Absence of systemic lupus features helps distinguish from classical SLE.

Explanation

A. Pembrolizumab → ✅ Lupus-like GN via immune activation.

B. Pemetrexed → ⚠️ Causes tubular toxicity, not GN

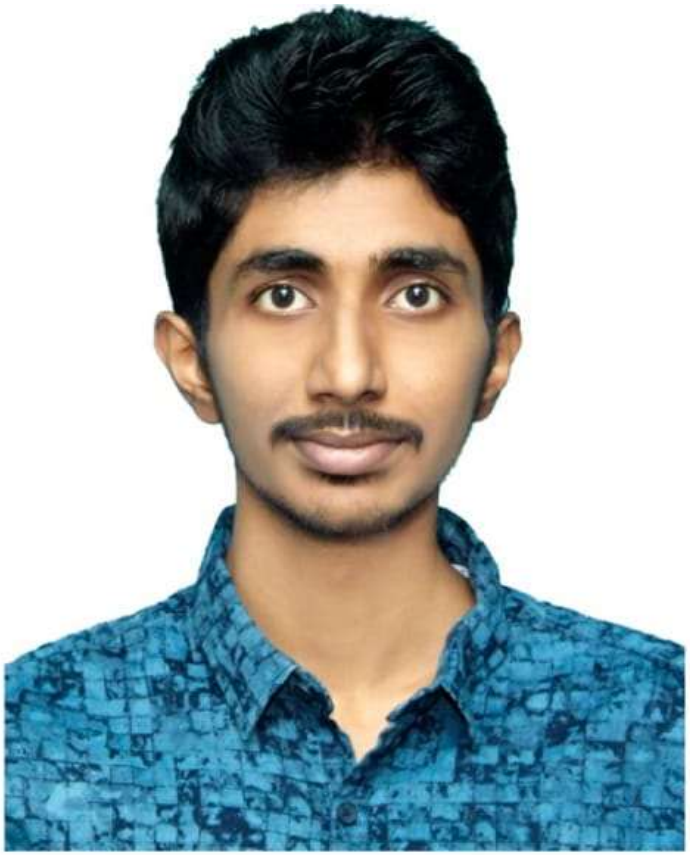
C. Carboplatin → ⚠️ Associated with TMA, not immune complex GN.

D. Paraneoplastic GN → ⚠️ Usually MCD/membranous; full-house IF rare.

Lupus-like GN in ICI Therapy

- Seen with PD-1 and CTLA-4 inhibitors (e.g., nivolumab, pembrolizumab, ipilimumab).
- Mimics lupus nephritis on biopsy: full-house IF, immune complex deposits.
- Distinction: Absence of systemic lupus features and autoantibody profile.
- Managed with discontinuation of ICI ± steroids/immunosuppressives.
- Requires kidney biopsy to confirm diagnosis.

Winner



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Thank you