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MONOCLONAL GAMMOPATHY OF RENAL SIGNIFICANCE PRESENTING AS MEMBRANOPROLIFERATIVE GLOMERULONEPHRITIS : REPORT OF TWO CASES

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Introduction

Proliferative Glomerulonephritis with Monoclonal Immunoglobulin Deposits (PGNMID) is :

- Rare **kidney-limited disease** within the spectrum of **MGRS**.
- **Clinical presentation:** proteinuria, impaired renal function, sometimes nephrotic syndrome; acute nephritic syndrome uncommon.
- **Diagnosis:** kidney biopsy showing **glomerular deposits of monotypic immunoglobulins**.
- **Distinctive feature:** circulating monoclonal protein or B-cell clone identified in only ~30% of cases.

Implication: therapeutic decision-making remains **challenging** due to limited clonal identification.

References

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- Nasr SH, Sethi S. PGNMID: update on diagnosis and management. Clin Kidney J. 2021;14(1):28–37.

Cases

We report two young patients diagnosed with proliferative glomerulonephritis with monoclonal immunoglobulin deposits (PGNMID), both presenting with a membranoproliferative glomerulonephritis (MPGN) pattern and monotypic light-chain deposits, in the absence of detectable circulating monoclonal protein or hematologic clone.

The first patient, a 28-year-old man, presented in September 2021 with nephrotic syndrome. Laboratory investigations revealed proteinuria of 7 g/24 h, anemia (hemoglobin 8 g/dL), and hypoalbuminemia (18 g/L), with preserved renal function. Kidney biopsy showed MPGN with C3 deposits and lambda light-chain restriction. All etiological investigations were negative . Despite the absence of an identifiable clone, the patient received four cycles of bortezomib, cyclophosphamide, and dexamethasone (VCD), achieving complete renal remission with a progression-free survival of 54 months.

The second patient, a 32-year-old man, presented in November 2022 with severe renal failure (eGFR 13 mL/min/1.73 m²), requiring dialysis. Kidney biopsy demonstrated MPGN with C3 deposits and kappa light-chain restriction. Hematologic evaluation did not identify any monoclonal protein or clonal disorder and an extensive etiological workup was negative. . Treatment with four cycles of VCD resulted in no clinical response.

Discussion

PGNMID

- Rare entity at the interface of nephrology and hematology.
- Diagnostic challenge: absence of circulating monoclonal protein or identifiable clone → “renal-limited” disease.
- Case observations:
  - * Patient 1 (preserved renal function) → complete durable remission after Bortezomib.
  - * Patient 2 (advanced renal failure, dialysis) → primary refractoriness despite similar histology.
- Key insight: timing of intervention and baseline renal function are critical determinants of outcome.
- Early treatment: may reverse renal injury before irreversible damage.Late treatment: limited efficacy in advanced disease.

Conclusion

Diagnostic & therapeutic challenge.

Clinical heterogeneity.

Treatment response variability

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