Title: *A successful reintroduction of immune checkpoint inhibitor treatment after a biopsy proven Minimal Change Disease and Acute Interstitial Nephritis*

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Abstract:

A 77-year-old Hispanic male with a history of epithelioid mesothelioma, benign prostatic hyperplasia, and biopsy-proven acute interstitial nephritis (AIN) with minimal change disease (MCD) required further plans for treatment due to advancing malignancy. His oncologic treatment initially included cisplatin and pemetrexed from October to November 2024 without significant response. Combination immunotherapy with nivolumab and ipilimumab was subsequently initiated on December 23, 2024, with cycle 3 completed on May 7, 2025.

Baseline serum creatinine remained stable at 0.9 mg/dL until May 2025, when he developed acute kidney injury with creatinine increasing to 2.7 mg/dL, associated with hypoalbuminemia and nephrotic-range proteinuria. Kidney biopsy demonstrated minimal change disease with diffuse podocyte foot process effacement greater than 90%, minimal chronic fibrosis, and concurrent acute interstitial nephritis without immune complex deposition.

The renal injury was felt to be most likely secondary to immune checkpoint inhibitor therapy given the temporal relationship with immunotherapy exposure, although malignancy-associated or primary MCD could not be completely excluded. The patient completed a 3-month course of prednisone with complete clinical remission.

In March 2026, the decision was made to reinitiate the patient on single agent anti-PD1 treatment with prednisone. At follow up, his renal function remained stable with serum creatinine of 1.1 mg/dL, serum albumin improved to 4.2 g/dL, and urine protein-to-creatinine ratio stable at 0.6 mg/g in April 2026. Blood pressure remained well controlled without lower extremity edema. Notably, the patient successfully tolerated re-initiation of single-agent nivolumab for four additional cycles while maintained on prednisone 10 mg daily, without recurrence of significant proteinuria or worsening kidney function. Repeat CT imaging demonstrated improvement in pulmonary nodules and favorable treatment response.

This case highlights successful treatment of immune checkpoint inhibitor-associated MCD and AIN with corticosteroids, while demonstrating that cautious immunotherapy rechallenge may be feasible with close nephrology monitoring and concurrent steroid therapy.