

A Cautionary Side of the Widely Prescribed: A Case of PPI-Induced AIN

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Introduction

- Proton pump inhibitors (PPIs) are widely prescribed for the treatment of gastric acid-related disorders.
- While generally well-tolerated, PPIs are not without side effects, including kidney injury.

Case

- A 54-year-old male with rheumatoid arthritis presented with fever, fatigue, and arthralgias.
- Patient began PPI one month prior due to NSAID-induced peptic ulcer disease.
- Admission labs revealed acute kidney injury, with a creatinine of 2.32 mg/dL.
- Kidney function continued to worsen despite supportive care, with peak creatinine 3.8 mg/dL.
- Contrast-enhanced imaging was negative for obstruction and vasculitis with negative serologies.

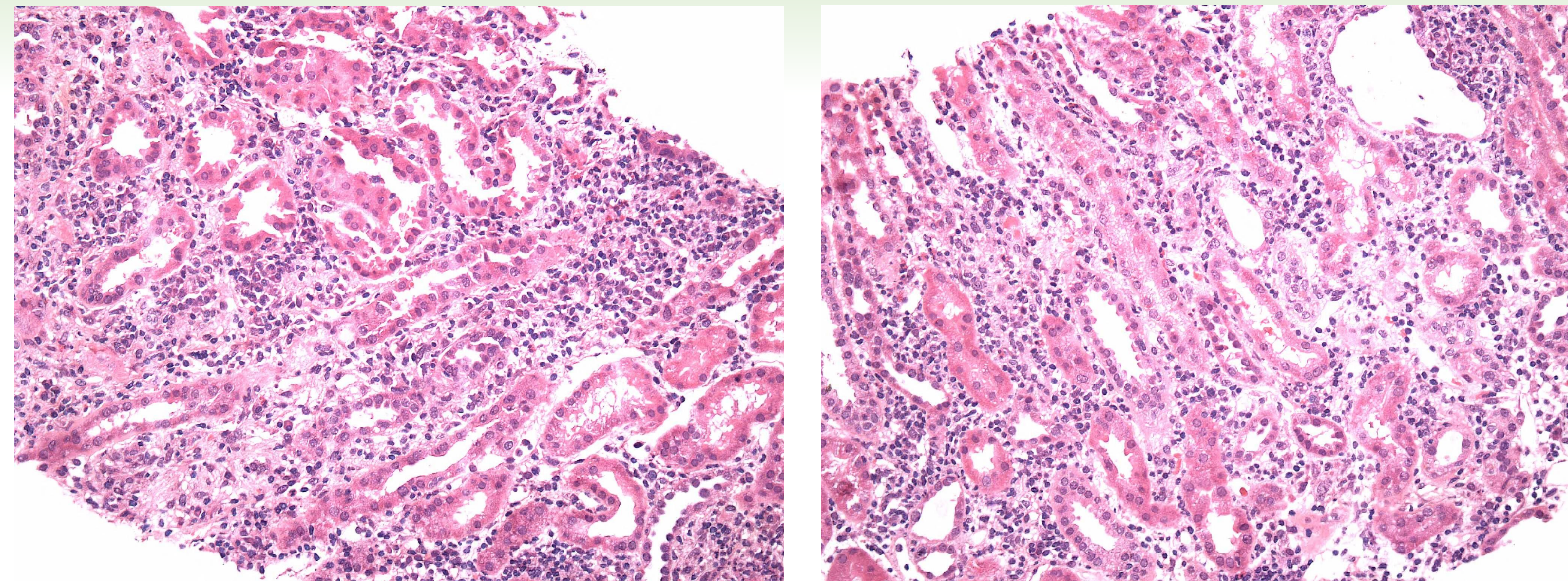


Figure 1: Evidence of interstitial edema with lymphocytic infiltrate revealed on histology of renal biopsy.

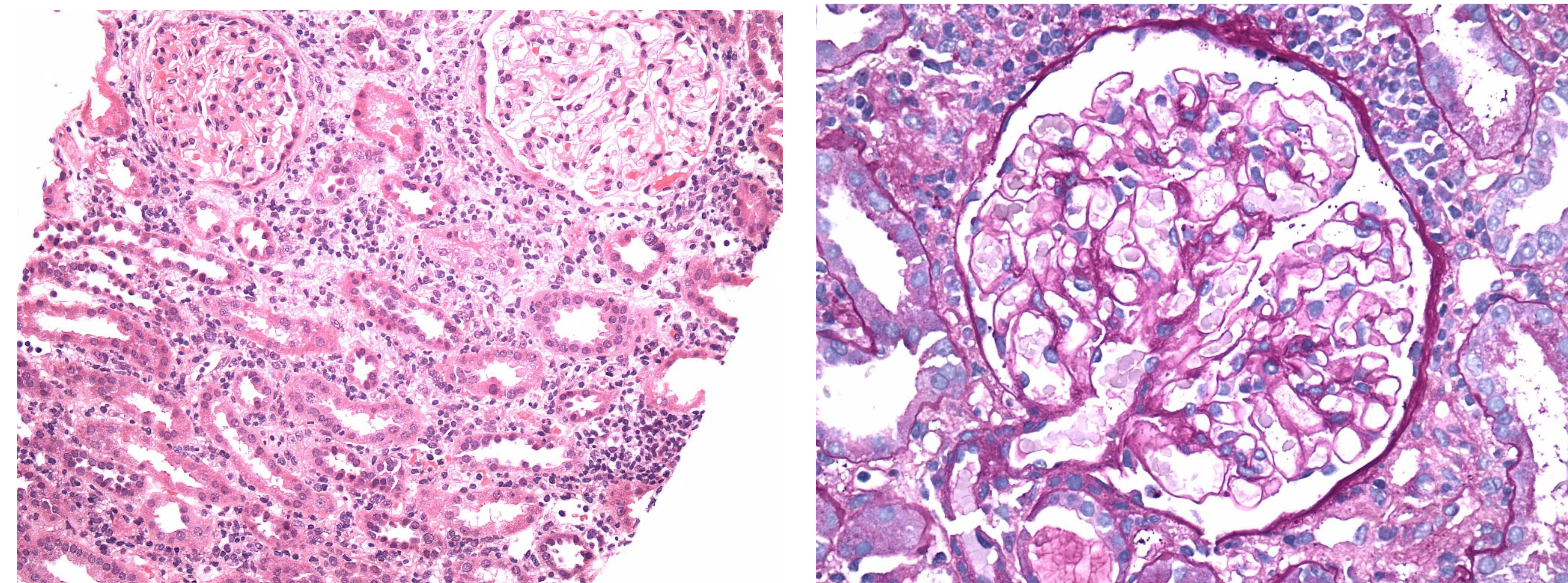


Figure 2: Visualization of tubulitis (*left*) with abundant neutrophils in glomerulocentric pattern (*right*).

Outcomes

- Renal biopsy revealed findings most consistent with acute interstitial nephritis (AIN).
- Ultimate diagnosis of PPI-induced AIN as patient took no other medications which could be implicated.
- With steroid treatment and replacement of PPI with H2 receptor blocker, patient's renal function improved significantly.

Discussion

- Acute interstitial nephritis is a well recognized, albeit rare complication, of PPI therapy.
- Treatment requires removal of the offending agent as well as initiation of steroids.
- With treatment, 30-70% of patients may still develop chronic kidney disease.

Conclusion

- Widely perceived as a benign medication, PPIs have potential for life-altering complications.

References

1. Brewster UC, Perazella MA: Proton pump inhibitors and the kidney: critical review. Clin Nephrol 68: 65–72, 2007. PMID: 17722704