ACUTE INTERSTITIAL NEPHRITIS AND PPIs: CASE REPORT AND REVIEW OF LITERATURE

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With improved gastroprotective agents on the market, their association with kidney disease has recently emerged as an important complication. Since the removal of methicillin from the US market, other classes of drugs have now been reported to cause acute interstitial nephritis (AIN). A major drug class are proton pump inhibitors (PPIs) used to treat gastro-esophageal reflux disease.

We report a case of PPI-induced AIN in a 78-year old woman who presented with an acute rise in serum creatinine from 0.8 to 3.6 mg/dL after three months of esomeprazole 40mg twice daily. She presented to her primary with generalized malaise and incidental labs showed the above. The patient was apyrexic, demonstrated no rash, eosinophilia or urine eosinophils. She had trace protein and microscopic hematuria with sterile pyuria. Renal biopsy showed mixed inflammatory cells in the interstitium, predominantly plasma cells admixed with lymphocytes and some neutrophils and eosinophils with presence of mild tubulitis.

We also conducted a computerized search of English language literature for studies that addressed PPI-induced AIN during the period 1960 through June 2007 using MEDLINE, PREMEDLINE, and CINAHL. We used combinations of terms related to AIN (acute interstitial nephritis, acute renal failure, acute kidney injury (AKI) and acute tubulointerstitial nephritis), and PPIs (rabeprazole, lansoprazole, omeprazole, pantoprazole and esomeprazole). We reviewed in detail 29 articles consisting of 94 biopsy-proven and 19 non-biopsy proven cases of PPI-induced interstitial nephritis.

With the emerging association between AIN and PPIs, it is essential for clinicians to recognize this as a common cause of AKI. The increasing use of PPIs change the diagnostic spectrum for patients suffering from acute kidney injury. Clinical manifestations are subtle and atypical, and require a thorough history, physical, and laboratory work-up. Perhaps the most important aspect is recognition of this entity by primary care providers, and close collaboration with nephrology specialists in order to facilitate the diagnosis and treatment modalities to preserve renal function and prevent CKD.