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671 100% Use of Infection Control Procedures in Hemodialysis Facilities: Call to Action

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On the Cover

What's the diagnosis?

We report a case of a 66-year-old man with history of recurrent sinusitis, asthma, hepatitis C and hepatitis B who presented with gait instability, progressive lower extremity edema and dyspnea. He was found to have AKI with serum creatinine of 2.0 mg/dL (baseline 0.8 mg/dL) and WBCs count of 10.2 with peripheral eosinophilia 23%. Urinalysis was positive for proteinuria (2+) and mild hematuria without dysmorphic RBCs or RBCs casts. Urine protein/creatinine ratio was 1.8 g. Kidney ultrasound was unremarkable. Hepatitis B and HIV viral loads were undetectable. Complement levels were normal. RF and serum cryoglobulin were negative. Patient had positive p-ANCA (1:640) and MPO antibodies (1:103). Other serologies were negative. CT of the chest showed multiple lung nodules. Kidney biopsy demonstrated evidence of eosinophilic granulomatosis with polyangiitis (EGPA) along with arteritis, crescents and necrotizing GN. Patient received cyclophosphamide and prednisone. The patient's serum creatinine returned to baseline and protein/creatinine ratio improved to 0.6 g.

Figures 1 and 2 demonstrate diffuse interstitial inflammation with eosinophils, identifiable by their characteristic H&E staining pattern. Specifically the eosin, an acidic dye which is negatively charged, stains the basic cytoplasm of these cells a granular pink color. Focal necrotizing arteritis with eosinophils are also seen in figure 1. Figure 3 shows glomerulonephritis with focal crescents using silver stain. EGPA is necrotizing vasculitis that affect small and medium vessels. Clinical manifestations can include asthma, sinusitis, lung infiltrates/nodules, neuropathy, and glomerulonephritis. Diagnosis is confirmed by biopsy. Treatment is a combination of prednisone and cyclophosphamide or rituximab.

(Images and text provided by Mohamad Hanouneh, MD, Diana S. Najjar, MD, and Duwuru Geetha, MBBS, MD, Johns Hopkins University, Department of Medicine, Baltimore, Maryland)