

# **INFECTIOUS ENDOCARDITIS WITH ANTINEUTROPHIL CYTOPLASMIC AUTOANTIBODIES AND PAUCI IMMUNE CRESCENTIC GLOMERULONEPHRITIS, A CASE REPORT**

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Circulating antineutrophil cytoplasmic autoantibodies (ANCA) accompanied by pauci immune crescentic glomerulonephritis on renal biopsy typically implies a differential of three small vessel vasculitides. Conversely, infective endocarditis (IE) associated glomerulonephritis involves immune complex deposition and generally is ANCA negative. We present a case of IE accompanied by ANCA positive pauci immune crescentic glomerulonephritis.

A 58-year-old gentleman hospitalized four months previously with IE presented with a three-month history of copper-colored urine. Examination revealed a poor dentition and a grade III/VI holosystolic murmur heard over the apex. Serum creatinine was initially 3.6 mg/dL, increased from a baseline of 1.0 mg/dL. Fractional excretion of sodium was 3.98%, and urine protein to creatinine ratio was 2940 mg/g. Urinalysis included red cell casts along with many RBCs and WBCs. Echocardiogram showed mitral valve vegetations with regurgitation. Blood cultures grew *Streptococcus constellatus* and *Enterococcus faecalis*. Serum ANCA was strongly positive with specificity for antiproteinase 3. Renal biopsy revealed necrotizing crescentic glomerulonephritis and electron microscopy showed no electron dense deposits. Six weeks of intravenous vancomycin and streptomycin yielded resolution of his bacteremia, clearance of vegetations, and a decrease in creatinine to 2.5 mg/dL. He never required hemodialysis and was discharged home free of complaints.

The proper treatment for ANCA positive IE is not known. It is obvious that antibiotics are essential; however, the role of steroids is not fully understood. In this case, immunosuppressants were avoided out of concerns for potential exacerbation of ongoing bacterial infection. There are no controlled studies that assess the role of immunosuppression such as cyclophosphamide in the treatment of acute kidney injury due to IE. In addition, in a patient with ANCA associated acute kidney injury and febrile illness, the possibility of IE should be entertained. We show in this case that the treatment of IE actually has a significant impact on the resolution of acute kidney injury.