Asymptomatic allograft pyelonephritis in a renal transplant recipient

A Young Kim, Eun Jung Lee, Seok Hui Kang
Department of Internal Medicine-Nephrology, Yeungnam University Medical Center, Korea, Republic of

Case Study: Pyelonephritis post-renal transplantation is common and some cases may be asymptomatic. A 66-year-old female presented for a renal transplant biopsy for investigation of graft dysfunction. She had a history of end-stage renal disease due to unknown cause and had undergone peritoneal dialysis in 2015. She underwent a deceased renal transplantation at a tertiary medical center. Her creatinine plateaued between 1.2 and 1.5 mg/dL and maintenance immunosuppressive regimen included tacrolimus, mycophenolate mofetil, and steroids. Urinalysis revealed sustained pyuria after transplantation and we maintained prophylactic antibiotics (Bactrim). On POD 1 year, her serum creatinine had increased to 2.16 mg/dL. We planned graft biopsy. She was admitted to our hospital without symptoms and high-sensitivity C-reactive protein was mildly increased (0.73 mg/L). She underwent a transplant biopsy and no immediate complications. The microscopic finding showed many plasma and polymorphonuclear leukocyte infiltration in interstitium and tubular epithelial cells. Neutrophilic cast was observed in tubule lumen. C4d staining and donor specific antibody were negative. The pathologic finding was consistent with acute pyelonephritis. We administrated cefixime against urinary tract infection. Graft function was gradually recovered after start of antibiotics. We performed a re-biopsy after 14 days’ treatment. The pathologic finding showed marked decreased inflammatory cells in interstitium and tubular epithelial cells. Antibiotic therapy was stopped and graft function was stable with a creatinine of 1.9 mg/dL. We present a case of a transplant recipient who underwent a diagnostic renal biopsy to investigate graft dysfunction but had asymptomatic allograft pyelonephritis.