Urinary Sporotrichosis in a Renal Allograft Recipient

S.K.		Agarwal
S.C.		Tiwari
S.C.		Dash
S.N.		Mehta
S.		Saxena
U.		Banerjee
R.		Kumar
U.N.		Bhunyan

Department of Nephrology, Surgery, Pathology and Microbiology, All India Institute of Medical Sciences, New Delhi, India

Dr. Sanjay K. Agarwal, Assistant Professor, Department of Nephrology, Aiiims, New Delhi-110029 (India)

Dear Sir,

We are reporting a case of urinary sporotrichosis in a renal transplant recipient. The patient had a radiolucent calculus with recurrent urinary tract infection.

A 23-year-old male, having chronic glomerulonephritis with end-stage renal failure underwent renal transplantation in July 1985. His mother was the donor with one haplotype match with the recipient. Postoperatively his renal function did not improve steadily.

Ultrasound examination of the abdomen showed moderate hydronephrosis of the graft with narrowing of the lower end of the ureter. After confirming the finding on radionucleid scan on the 7th postoperative day, he was reoperated and a ureteroneocystostomy was done.

Postoperatively he developed supra-pubic urinary leak which was managed conservatively.

Following surgery his renal function improved slowly and on the 17th postoperative day serum creatinine was $106 \mu\text{mol/l}$ (1.2 mg/dl). He continued to have recurrent urinary tract infections which were treated according to the urine culture and sensitivity. On the 75th day following transplantation, a follow-up ureterocystoscopy was done which was essentially normal. However, his symptoms of lower urinary tract infection continued to persist even though the urinary cultures were repeatedly normal.

In April 1986, although a plain radiogram of the abdomen was normal, the patient passed a stone per urethra, which was mainly made of ammonium phosphate with traces of calcium and oxalate. Keeping the possibility of a radiolucent calculus he was admitted for investigations. While in the hospital, he had acute retention of urine associated with enlargement of the graft which spontaneously got relieved within 12 h. However, a repeat ultrasonogram still showed hydroureteronephrosis of the allograft with an echoic shadow at the lower end of the ureter. An antegrade pyelography performed at this time showed a dilated ureter (1.2 cm) and a stone at the lower end of the ureter. As the stone could not be dislodged, a percutaneous nephrostomy was done. Once the acute stage was over, he was operated for ureterolithotomy. During surgery multiple small yellowish calculi were found at the lower end of the ureter with a large stone 2 cm proximal to the vesicoureteric junction

associated with narrowing of the ureter. Pyelolithotomy and pyelovesicos-tomy with nephrostomy was done. On histology the ureteric wall showed features of chronic ureteritis. Postoperatively the patient passed a soft whitish mass which on histological examination was found to be dematiaceous fungal elements. On culture it grew *Sporothrix schenckii*. But before any specific therapy could be started, the patient died due to an accident. Fungal infection occurs in 9-14% of patients following renal transplant [1], but *Sporothrix* infection in a renal transplant patient has not been reported so far. Most fungal infections are caused by *Candida*, *Cryptococcus* or *Aspergillus* [2]. The central nervous system, lung and blood are the most frequently affected sites, but the gastrointestinal tract, skin and urinary tract can also be involved [1]. *Sporothrix* infection has been recently reported in a patient having HIV infection [3]. *Sporothrix schenckii* a saprophyte and infection is usually limited to the skin, subcutaneous tissues and lymphatic channels. Spread beyond an extremity is rare and port of entry in these patients is usually traumatic implantation. The pulmonary route has also been implicated in disseminated sporotrichosis in some cases. Immunosuppression in any form predisposes to hematogenous spread. Osteoarticular, pulmonary, ocular and central nervous system sporotrichosis [4] have been reported in immunocompromised patients. To the best of our knowledge there is only 1 report of pyelonephritis [5] caused by *Sporothrix* and ours is the first case of urinary tract infection caused by *Sporothrix* in a renal transplant patient.

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