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A rare case of VUR-associated hydronephrosis in hemodialysis patient without residual renal function treated by percutaneous nephrostomy.

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Case Study: Case report

Vesicoureteral reflux (VUR) is the retrograde flow of urine from the bladder into the ureter and toward the kidney, VUR which was associated with Uurinary tract infection (UTI). Reflux nephropathy (RN) is the renal scarring that is diagnosed in patients with VUR, and account for 12% to 21% of chronic kidney disease in pediatric population. We report a case of VUR-associated hydronephrosis in hemodialysis patient without residual renal function treated by percutaneous nephrostomy (PCN).

A 62-year-old Korean man with end-stage renal disease (ESRD) who was undergoing hemodialysis presented to the emergency department for evaluation of fever. He had a history of VUR in childhood and has received regular hemodialysis for 10 years following the diagnosis of ESRD. He had maintained PCN for two years before and after the initiation of dialysis. His initial vital signs indicated a blood pressure of 130/80 mmHg, heart rate of 80 beats per minute and temperature of 37.5°C. Physical examination revealed left costovertebral tenderness. Laboratory testing demonstrated leukocytosis (13.1×10^3/mL) and pyuria. His serum concentration of C-reactive protein was 10.58mg/dL (reference: < 0.3 mg/dL). Abdominal computed tomography showed the presence of hydronephrosis of the left kidney and atrophy of right kidney (Fig1). We performed PCN for management of hydronephrosis. Antibiotic treatment using 2g of ceftriaxone (third-generation cephalosporin) was administered for a presumed diagnosis of UTI. *Streptococcus dysgalacitae* observed on urine culture were susceptible to ceftriaxone. The amount of urine excreted through PCN was lower than 80 ml/day. Follow-up abdominal computed tomography on day 13 revealed no dilatation of the renal pelvis and ureter (Fig2). After appropriate treatment, including PCN and antibiotics, he had subsequent improvement symptoms and laboratory results.

In conclusion, long-term PCN might be necessary in hemodialysis patient without residual renal function for the treatment of VUR-associated hydronephrosis.

Fig1. Hydroneprosis of the left kidney and atropy of right kidney

Fig2. No dilatation of the renal pelvis and ureter

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