A CASE OF CONGENITAL ANOMALY OF THE URINARY TRACT AND NEUROGENIC BLADDER

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Introduction

Anomalies of the genitourinary tract occur in approximately 10% of the population and account for about one third of all congenital malformations in children (1). Congenital malformations involving the genitourinary system are major therapeutic challenges faced by the practising urologist.

Case Report

A 31 year old Chinese man with spina bifida presented with right loin pain and fever. Ultrasonography of the abdomen showed right hydronephrosis and absent left kidney. He had a long history of lower urinary tract symptoms mainly, frequency with occasionally difficulty in passing urine since childhood. There was, however, no history of urinary incontinence. A nephrostomy tube was inserted and antibiotic administered which successfully treated the urinary tract infection. Antergrade pyelography showed ureteric obstruction in the distal ureter at its ectopic insertion. The patient complained of loin pain when attempts were made at clamping the nephrostomy tube. Cystoscopy and ureteroscopy showed an ectopic ureteric insertion at the prostatic urethra (Figure 1) and a huge dilated tortuous right ureter with gross hydronephrosis. The bladder was also trabeculated with saccules (Figure 2). The patient had mildly impaired renal function.

Urodynamics done showed a hypocompliant bladder (10.7 ml/cm H20) with a maximum cystometric capacity (MCC) of 250 cc. (Maximum Pdet at MCC is 55 cm H20). Micturating cystourethrogram (MCU) showed grade 5 refluxing megaureter. The DPTA nuclear scintigraphy showed a grossly hydronephrotic right kidney with a glomerular filtration rate (GFR) of 52 ml/min with a prolonged drainage (> 60 mins). Plain radiograph showed spina bifida at L4, L5 and S1 levels with scoliosis of the lumbar-sacral spine. Computerised tomography of the abdomen revealed absence of the left kidney.

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The patient subsequently underwent reimplantation of his right ureter (Figure 3) and an augmentation ileocystoplasty was done for his hypocompliant bladder. Post-operatively, he had to do clean intermittent catheterization (CIC). In the first year after surgery, he had several episodes of UTI which were successfully treated with antibiotic. There was no evidence of deterioration in renal function.

The most common sites of the ectopic ureteric insertion in male are posterior urethra (47%), seminal vesicle (33%), prostatic utricle (10%) (3,4). Ectopic ureters can also drain into other wolffian duct structures, like the epididymis and the vas deferens. As all these locations are proximal to the external sphincter, males with ectopic ureters do not usually suffer from urinary tract infection but occasionally from constipation, pelvic pain, discomfort during ejaculation, and infertility (5).

In conclusion, this unique case report stresses the importance of:
1. investigating a male patient with urinary tract infection;
2. congenital malformations of the genitourinary system could be associated with other complexed medical or developmental problems, as seen in this case of neurogenic bladder.

References