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POSTERIOR URETHRAL VALVES IN THE ADULT: REPORT OF TWO CASES
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POSTERIOR URETHRAL VALVES IN THE ADULT: REPORT OF TWO CASES

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ABSTRACT

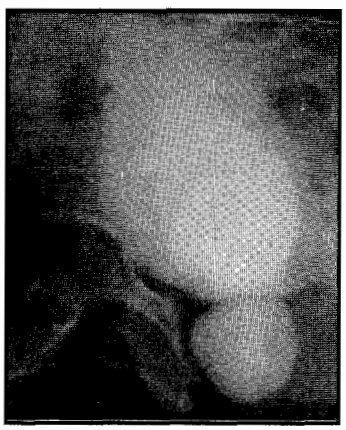
Posterior urethral valves occur commonly in children. Occasionally, they present in adulthood. A report is made of two adult cases, aged nineteen and twenty one years with posterior urethral valves treated in Mombasa, Kenya. Presentation was with symptoms of bladder outflow obstruction. Urinaly tract ultrasound and micturating cystourethrograms were the radiological investigations done. Endoscopic electrosurgical ablation of the valves was undertaken, resulting in symptomatic and radiological resolution. The diagnosis of posterior urethral valves should be borne in mind in any man with symptoms of bladder outflow obstruction.

INTRODUCTION

Posterior urethral valves are congenital submontanal membranes obstructing the posterior urethra more or less severely(1,2). It is the commonest cause of lower urinary obstruction in male children(3). Late diagnosis of posterior urethral valves during adulthood is uncommon(4).
The membrane is usually attached posteriorly immediately below the level of the verumontanum, with a pinhole meatus posteriorly, adjacent to the verumontanum. The anterior anchorage of the membrane can be very distal and can go through the external sphincter(5).

Figure 1

Micturating cystourethrogram in a 13 year old boy with posterior urethral valves



The anatomical effects of posterior urethral valves on the urinary tract are mainly represented by the dilatation and elongation of the posterior urethra, the thickening of the bladder neck which can be widely open or very narrow, and the thickening of the detrussor, which is often trabeculated (Figure 1). Subsequent vesicoureteric reflux is often noticed with a marked dilatation of the upper tract and renal deterioration.

CASE REPORTS

Case 1: A 21 year old man of black African origin presented with slight difficulty in voiding, frequency and burning. A tentative diagnosis of urethral stricture was made. Urinary tract ultrasound and a micturating cystourethrogram were done. The ultrasound examination was normal. The micturating cystourethrogram showed a dilated posterior urethra with a large post-void urine residual (Figure 2a, 2b, 2c).

Cystoscopy showed marked bladder trabeculation. The valves were fulgurated electrosurgically with a Bugbee electrode. He had complete resolution of symptoms. A follow up micturating cystourethrogram done 2 years later in November 2000 is shown (Figure 3a, 3b).

Figure 2a

Case 1: Twenty one year old male pre-operative micturating cystourethrogram. Antero-posterior view showing dilated posterior urethra

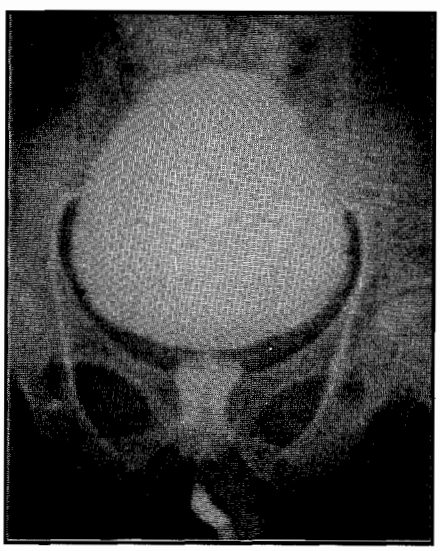


Figure 2b

Oblique view

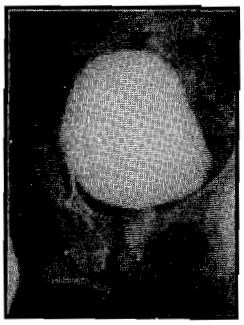


Figure 2c

Note large post void residual

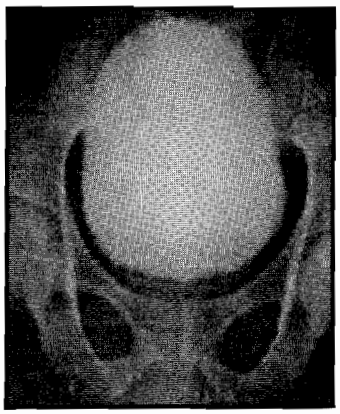


Figure 3a

Case 1. Post-operative micturating cystourethrogram two years later. Note the patent urethra

Figure 3b

Bladder emptied completely

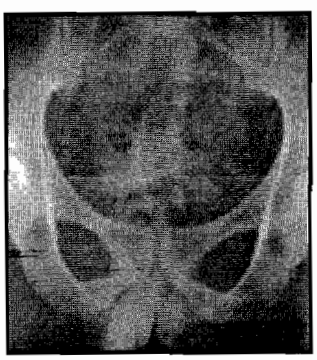


Figure 4

Case 2: Nineteen year old male. Pre-operative micturating cystourethrogram

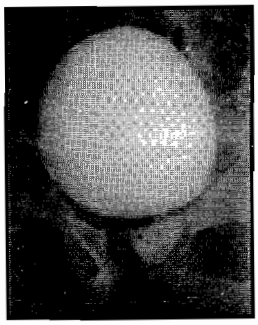
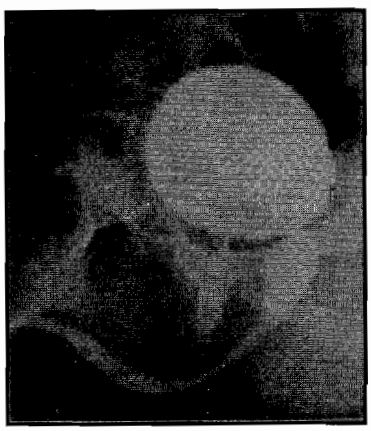


Figure 5

Case 2: Post-operative micturating cystourethrogram four years later showing a patent urethra



Case 2: A 19 year old man of Arabic descent presented with burning and frequency of urination. He had slight difficulty in voiding. Ultrasound examination of the urinary tract was normal. A micturating cystourethrogram showed a dilated posterior urethra (Figure 4).

Cystoscopy showed bladder trabeculation with mild cystitis. Endoscopic electrosurgical fulguration of the valves was undertaken with a Bugbee electrode.

Postoperatively he had persistent frequency which was controlled with imipramine, an anticholinergic agent. A follow-up micturating cystourethrogram done four years later in June 2003 is shown

DISCUSSION

Young *et al.* described posterior urethral valves in 1919(1), categorised the various types, and initiated endoscopic treatment through a cystostomy. Valves cause a varying degree of urinary tract obstructive changes, ranging from severe hydronephrosis with renal dysplasia to relatively normal upper urinary tracts(2,6).

Diagnosis is predominantly radiographic, a micturating cystourethrogram being essential. The classic appearance is of a dilated and elongated posterior

urethra, a cut-off of urethral calibre, bladder neck hypertrophy and occassionally the leaflets are visible as filling defects. Many radiographic variations have been described(7).

Posterior urethral valves are the commonest cause of lower urinary tract obstruction in the male child. The usual presentation is urinary tract infection and renal failure in the first six months of life. A few patients present with an abdominal mass, being a dilated kidney or distended bladder. Urinary incontinence is a presenting feature in later childhood(3,8,9). Now about 50% of posterior urethral valves are diagnosed antenatally(3).

It is not generally appreciated that posterior urethral valves may cause symptoms of obstructive uropathy which first appear in adult life as illustrated by Marsden's two cases reported in 1969(4). These patients, aged 46 and 50 years presented with symptoms of urinary retention with overflow and bilateral hydronephrosis. The patients presented here, aged 19 and 21 years, had symptoms of burning, frequency and mild difficulty in urination, which are therefore milder. The upper tracts were normal.

Retrograde endoscopy is the most common procedure and was first done by Randall in 1921(10). The treatment of Marsden's two cases was with a cold punch resectoscope and diathemy respectively. In both cases presented here, electrosurgical fulguration with a Bugbee electrode through a cystoscope, was the procedure used.

The diagnosis of posterior urethral valves may be made more frequently if micturating cystourethrograms are performed routinely on all males with micturation symptoms(11).

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