

Late Presentation of Posterior Urethral Valves

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ABSTRACT

Presence of posterior urethral valves (PUV) is the most common cause of urinary tract obstruction in the male neonate. Late presentation occurs in 10% of cases. We present a case of PUVs in an adult male who presented with history of obstructive lower urinary tract symptoms and hematuria. On evaluation, he was found to have raised serum creatinine level. A voiding cystourethrogram (VCUG) could not be completely performed because of narrowing in the posterior urethra. A rigid urethrocystoscopy was performed at which he was found to have type-I posterior urethral valve which were fulgurated. A repeat uroflowmetry revealed maximum flow rate of 12 ml/second. This case highlights that PUVs is not solely a disease of infancy but may also present late. VCUG is the radiological investigation of choice but the diagnosis may be missed. A urethrocystoscopy is advised if there is a high index of suspicion.

Key Words: *Posterior urethral valves. Late presentation. Lower urinary tract symptoms. Voiding cystourethrography. Urethrocystoscopy.*

INTRODUCTION

The presence of posterior urethral valves (PUV) is the most common cause of lower urinary tract obstruction in male neonates, with a reported incidence of one case per 8,000 to 25,000 live births.¹ Langenbeck first reported congenital obstruction of the prostatic urethra in 1802 whereas Young defined the condition and named it as posterior urethral valves. Late presentation accounts for around 10% of cases.² The diagnosis is made prenatally or at birth, when male newborns are evaluated for prenatal hydronephrosis, or during early childhood, but rarely during adolescence or adulthood. Cardinal signs on antenatal ultrasound include hydronephrosis, increased echogenicity of renal parenchyma, thick walled distended bladder and dilated posterior urethra.³ The clinical features of late presenters can be confused with many other diseases, thus, making the correct diagnosis difficult. Here, we report a case of late presentation of PUV, diagnosed on rigid cystoscopy.

CASE REPORT

A 20 years male presented with short history of obstructive lower urinary tract symptoms, namely, dysuria, poor urinary stream for 3 months and prior history of gross hematuria. His past medical history and examination was essentially unremarkable. On work-up, he was found to have a raised serum creatinine level of 1.5 mg/dl (normal range = 0.85 - 1.3). Urine culture grew *Escherichia coli* that was treated with appropriate

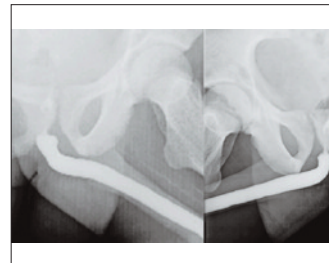


Figure 1: Retrograde urethrogram; showing no contrast flowing in bladder and dilated bulbomembranous urethra. An 8-F catheter could not be negotiated into the bladder.

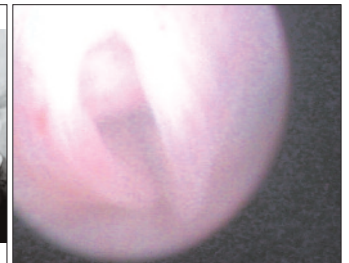


Figure 2: Cystourethrosopic view of posterior urethral valves.

antibiotics. He was evaluated for possible vesico-ureteric reflux. During VCUG, an 8-F catheter was not negotiable; hence, only retrograde urethrogram could be performed. It was reported as a tight stricture at bulbomembranous junction (Figure 1). MAG-3 radio-nuclide scan showed the split function of right and left kidney as 45% and 56% respectively and right lower polar renal scarring.

A rigid cystoscopy revealed type-I posterior urethral valves (Figure 2) that were fulgurated. On follow-up, his symptoms had markedly improved. His later evaluation with uroflowmetry (UFM) showed a maximum flow rate (Qmax) of 12 ml/second. He may need repeat fulguration in future.

DISCUSSION

PUVs is a congenital obstruction of the urethra which is one of the most devastating anomalies in urinary tract and one of the few that are life-threatening in the neonatal period. When detrusor hypertrophy overcomes the obstruction, PUVs may remain silent until later life. Around 10% of posterior urethral valve present late, the usual presentation is prenatal or at birth. Poor or weak stream, dribbling at voiding, repeated urinary tract

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Received: August 24, 2011; Accepted: April 17, 2013.

infection hematuria and chronic renal failure are the most common clinical pictures in adolescents and adult.⁴

Fulguration of PUVs not only relieves symptoms but also prevents further deterioration of the renal function.⁵ PUVs which are detected in infants are more severe than in adults. Other urological conditions that can mask symptoms in late presenters of PUVs include benign prostatic hyperplasia, urethral stricture, prostatitis, bladder sphincter dyssynergia, ejaculatory problem, infertility, enuresis and perineal pain.⁶ VCUG is the radiological investigation of choice. We requested for VCUG, but due to failure to pass catheter beyond bulbomembranous junction it was reported as a tight urethral stricture. During cystourethroscopy, no stricture was found, type-I PUV was found that was fulgurated with Bugbee electrode. Parkhouse *at al.* reported that 26% of patients had chronic or end stage renal failure in post-pubertal PUV patients.⁷ To-date, less than 100 cases of PUVs have been reported,⁸ presenting at this age, a small number due to diagnostic difficulties and presence of other pathological conditions.⁹

In this case, the treatment was effective that relieved the symptoms of patient. Late presentation of PUVs puts patients on risk. Some authors have suggested bladder neck incision in cases of persistent obstruction after PUV resection.¹⁰

REFERENCES

1. Atwell JD. Posterior urethral valves in the British Isles: a multicenter B.A.P.S. review. *J Pediatr Surg* 1983; **18**:70-4.
2. Young HH, Frontz WA, Baldwin JC. Congenital obstruction of the posterior urethra. *J Urol* 2002; **167**:265-7.
3. Kaefer M, Barnewolt C, Retik AB, Peters CA. The sonographic diagnosis of infravesical obstruction in children: evaluation of bladder wall thickness indexed to bladder filling. *J Urol* 1997; **157**:989-91.
4. Bomalaski MD, Anema JG, Coplen DE, Koo HP, Rozanski T, Bloom DA. Delayed presentation of posterior urethral valves: a not so benign condition. *J Urol* 1999; **162**:2130-2.
5. Martin J, Anderson J, Raz S. Posterior urethral valves in adults: a report of 2 cases. *J Urol* 1977; **118**:978-9.
6. Dutkiewicz S. Posterior urethral valves in an adult male: a case report. *Int Urol Nephrol* 1994; **26**:555-8.
7. Drouin G, Laperriere J, Gregoire A. Urethral valves as a cause of dilated Cowper's glands and perineal pain. *J Urol* 1978; **120**: 634-5.
8. Kilciler M, Basal S, Irkilata HC, Zor M, Istanbuluoglu MO, Dayanc M. Adult posterior urethral valve: a case report. *Ger Med Sci* 2010; **8**:8.
9. Jesus CM, Trindade Filho JC, Goldberg J. Late presentation of posterior urethral valve: two case reports. *Sao Paulo Med J* 2008; **126**:126-7.
10. Culty T, Delongchamps NB, Dominique S, Servin F, Ravery V, Boccon-Gibod L. Posterior urethral valves in adult with down syndrome. *Urology* 2006; **67**:424, e1- e2.

