

Unusual presentation of posterior urethral valve

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Background: Posterior urethral valve (PUV) may present with different symptoms, starting from abdominal distension, respiratory distress, and severe septicemia to failure to thrive.

Methods: A 5-year-old child presented with acute abdominal pain and was suspected to have complete intestinal obstruction. Exploratory laparotomy revealed that the bowel was severely adhered to inflamed bladder but no other abnormalities. After laparotomy the patient responded well, but had difficulty in urination. The patient was then confirmed with PUV by voiding cystourethrography, and underwent hook fulguration.

Results: The catheter was removed on the 4th day after fulguration. The patient was discharged in satisfactory conditions.

Conclusion: PUV has a wide range of clinical presentations and a proper collection of case history is essential to reach a correct diagnosis.

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Key words: posterior urethral valve;
intestinal obstruction;
clinical presentation

Introduction

Posterior urethral valve (PUV) is found exclusively in males with an incidence of approximately 1 in 5000.^[1] In 1919, Young et al^[2] made the first description of PUV, and until the 1960s, PUV was reported to have an extremely poor prognosis.^[3] When PUV is diagnosed postnatally the symptoms are often age-dependent. Generally, boys with the greater degree of urinary tract obstruction present earlier.^[3] Infants who are not diagnosed prenatally may present with infection,

hydronephrosis, ascites and/or thick and distended bladder. In severe cases, renal failure, congestive heart failure and respiratory distress may occur.^[4] With less obstructive PUV, upper tract changes are often minimal. These patients may escape ultrasonographic detection and diagnosis may be delayed until adolescence. We report a 5-year-old boy with PUV, who presented with acute intestinal obstruction.

Case report

The 5-year-old boy presented with a history of abdominal distension and pain and not passing flatus and feces for last 3 days. General examination showed that he was pale and dehydrated. His pulse rate was 118/min, feeble and hypovolemic, respiratory rate was 26/min and blood pressure in the right upper arm was 88/60 mmHg. His abdomen was distended and tender, and bowel loops were visible by physical examination.

Hemogram showed a low hemoglobin level (8.4 mg%), high total leucocyte count (11300/ μ l) with neutrophils accounting for 66%. Biochemical examination revealed high blood urea at 54 mg/dl, creatinine at 1.8 mg/dl and serum electrolytes approaching to normal values. X-ray abdomen erect view suggested small intestinal obstruction (Fig. 1). The patient was managed with intravenous (IV) fluids for volume deficit correction, nasogastric decompression, urethral catheterization and IV antibiotics. He was then subjected to emergency exploratory laparotomy after 6 hours of admission. Peroperatively, loops of distal ileum were found densely adhered to the inflamed and thickened bladder, which was the cause of intestinal obstruction. The bowel adhesions were released and the abdomen was closed. The patient recovered well in the first several days after operation.

The patient had difficulty in passing urine after removal of the catheter on the 4th day of post-operation. Initially, it was thought to be a complication of bladder catheterization but careful interrogation showed that the patient had a urinary complaint since birth (difficulty in passing urine, thin urinary stream and dribbling of urine). The patient was subjected to voiding cystourethrography (VCU), which showed a dilated posterior urethra with vesicoureteric reflux suggestive of PUV (Fig. 2). The patient underwent hook fulguration on the 6th

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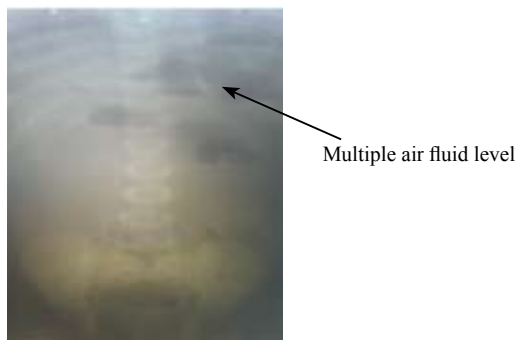


Fig. 1. X-ray of the abdomen.

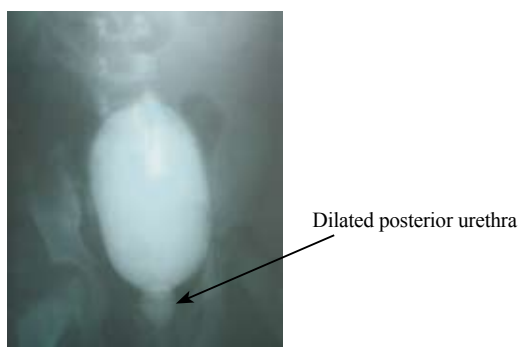


Fig. 2. Voiding cystourethrogram.

postoperative day. After the catheter was removed on the 4th day after fulguration, urinary stream was satisfactory. The abdominal stitches were removed on the 11th postoperative day and the patient was discharged in satisfactory conditions with proper follow-up advice.

Discussion

PUV is the commonest cause of urinary outflow obstruction in pediatric patients and the commonest obstructive uropathy leading to childhood renal failure.^[5,6] The presentation of PUV is variable.^[5] It ranges from in utero bilateral hydronephrosis and oligohydramnios^[7] to delayed presentation in form of voiding dysfunction, nocturnal enuresis, urinary frequency and urinary tract infection.^[8]

The incidence of late-presenting boys with PUV may be much higher than originally thought. Hendren^[9] suggested these cases were not rare but just infrequently identified. Ultrasonography helps in diagnosis of PUV but the gold standard is VCU.^[10] Thus complete radiological examination should include abdominal and pelvic ultrasonography in conjunction with VCU.^[5]

Primary valve ablation is the keystone of treatment for patients with PUV that might achieve the primary

goal of nephron preservation,^[5] but other procedures like vesicostomy or ureterostomy can also be justified in some particular cases in order to improve renal function prognosis.^[6] The low creatinine concentration in the first year of life is the most appropriate predictor of future renal function.^[11]

In conclusion, posterior urethral valve has a wide range of clinical presentations, and proper history inquiry is essential to reach a correct diagnosis. So patients presenting with acute intestinal obstruction with urinary complaints should be investigated to rule out posterior urethral valve.

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