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Original Research Paper

Urology

A RARE CASE OF POSTERIOR URETHRAL VALVE IN A FIFTEEN YEAR OLD ADOLESCENT BOY

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ABSTRACT Posterior urethral valves (PUV) is the most common cause of bladder outlet obstruction in pediatric male patients. Few patients may escape early detection and manifest only in late adolescence or even adulthood. Older patients usually present with lower urinary tract symptoms, recurrent infections and renal insufficiency. We present the rare case of an adolescent 15 year old boy presented late with lower abdominal pain, dysuria and altered renal function. USG abdomen shows left gross HDUN, thickened bladder wall with significant residual volume (1200ml). CECT KUB (done 1month before with normal creatinine level) shows left gross HDUN, right mild HDUN. MCUG shows dilated posterior urethra, pre-operative uroflow shows Qmax 7.2 ml/sec. Cystourethroscopy showed Type 1 PUV and endoscopic fulguration of valves done. Post-operatively patient voided satisfactorily with PVR=30ml. Post-operative serum creatinine normalised (0.8) and post-operative uroflow shows Qmax 19.2ml/sec.

KEYWORDS : HDUN, MCUG, dilated posterior urethra, Qmax, Type 1 PUV, endoscopic ablation of valves, PVR

INTRODUCTION:

Posterior urethral valves is a congenital obstruction of posterior urethra ascribed to valve like leaflet. PUV is the most common cause of bladder outlet obstruction in pediatric male population.

Most common type of obstructive uropathy leading to childhood renal failure. Posterior urethral valves (PUV) are now most frequently suspected by antenatal ultrasound.

Post-natally, PUV can have a broad spectrum of presentation ranging from a life-threatening pulmonary hypoplasia due to oligohydramnios, to milder obstruction with few pathological signs or symptoms that may escape early detection and manifest only in later childhood, adolescence or even adulthood.

Older patients usually present with lower urinary tract symptoms, overflow incontinence, recurrent infections, or less commonly, ejaculatory dysfunction, gross haematuria and renal insufficiency.

Case Report:

15 year old adolescent boy presented with abdominal pain, and occasional dysuria. He claimed to have been voiding "normally" throughout childhood. He had no history suggestive of recurrent urinary tract infections.

His past medical history was insignificant. The patient's abdominal exam revealed palpable urinary bladder. Neurological examination and lumbo-sacral spine were normal. Serum RFT shows elevated creatinine (2.4mg/dl). Urine studies were unremarkable.

Abdominal Ultrasound showed a gross left HDUN, grossly distended and thick walled bladder with high post-void residue (1200ml).

CECT KUB (Figure 1) done 1 month ago (outside) shows left kidney minimal contrast uptake and gross hydrour eteronephrosis, right kidney shows normal uptake and mild hydroureteronephrosis, bladder is grossly distended and thickened.

(CECT done 1 month ago in other hospital and at the time serum creatinine was 1.2).

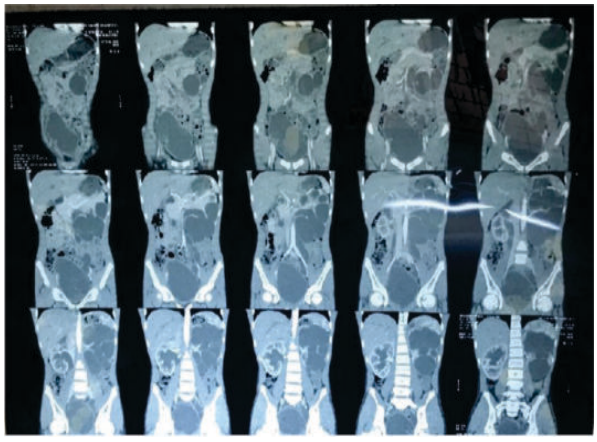

Figure 1. CECT KUB

A voiding cystourethrogram (VCUG/MCUG) was performed, which showed a grossly distended pear shaped bladder with irregular outline and thickened with a dilated posterior urethra. (Figure 2)

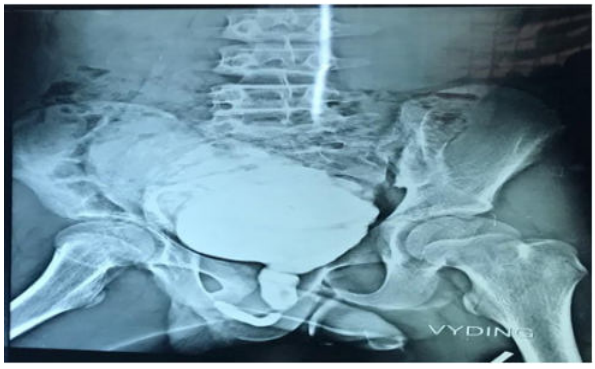

Figure 2. MCUG

Pre-operative uroflowmetry (Figure 3) shows Q-max of 7.2 ml/sec with average flow rate of 4.6ml/sec.

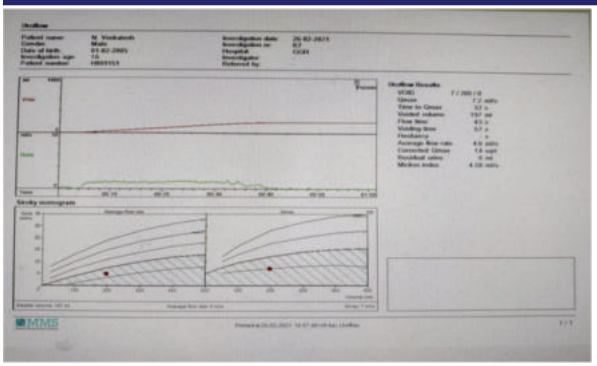

Figure 3. Pre-operative Uroflow

RESULTS:

Cystourethroscopy showed Type 1 PUV (Figure 4) and endoscopic fulguration of valves done.

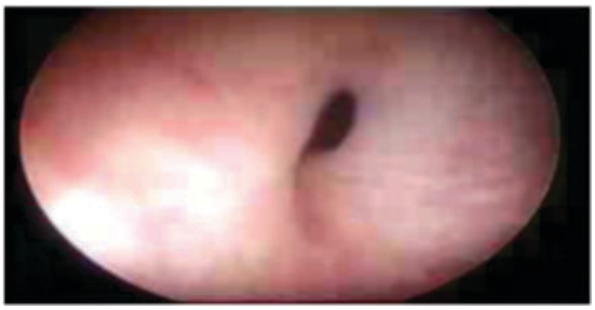

Figure 4. Endoscopic picture showing Type 1 PUV

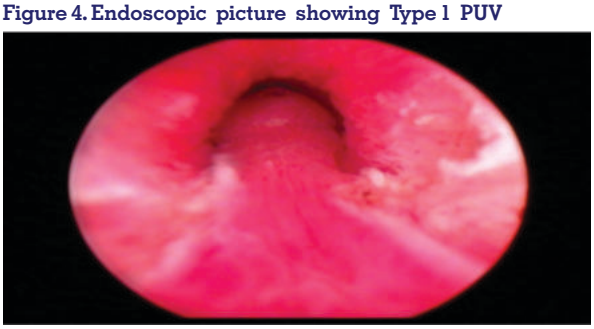

Figure 5. Endoscopic view of urethra after fulguration of PUV

Post operative period was uneventful. Foleys Catheter removed on POD 2 and voided satisfactorily. Post operative serum creatinine normalised (0.8). Post operative uroflow shows Qmax of 19.2ml/sec. (Figure 6)

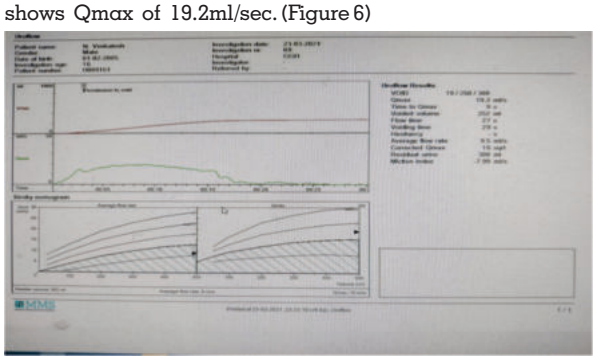

Figure 6. Post-operative Uroflow

Postoperative ultrasound shows minimal post voidal residue (30ml). Patient kept on regular follow up shows symptomatically better with normal serum creatinine and minimal post void residual urine.

CONCLUSSION

Posterior urethral valves is not merely a disease of infancy. PUV may present rarely in adoloscence and adults. Voiding cystourethrography should be considered in boys older than 5 years who have voiding complaints. Patients who present late with posterior urethral valves are at risk for progression to end stage renal disease.

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