POSTERIOR URETHRAL VALVE IN A SIX YEAR OLD BOY WITH NOCTURNAL ENEURESIS AND FAILURE TO THRIVE AS THE ONLY SYMPTOMS

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ABSTRACT

We report a case of posterior urethral valve (PUV) in a six year old boy with nocturnal eneuresis and failure to thrive as the only presenting symptoms.

The clinically occult lesion was only unravelled when micturating cysto-urethrogram revealed a dilated posterior urethra with a distal narrow stream of opacified urine, bilateral hydronephrosis and hydroureters, thus confirming an obstructive uropathy due to posterior urethral valves.

Eneuresis and haematuria are both documented symptoms of PUV which are barely mentioned at clinical rounds. In an entity where delay in diagnosis could result in irreversible renal damage, the need to raise the index of suspicions for, eneuresis and haematuria (especially microscopic haematuria), as important sysmptoms and sign in PUV is emphasized.

The need to remember genitourinary infections in the search for causes of recurrent PUO in the paediatric patient is readdressed.

Key Words: Posterior Urethral Valves, Nocturnal Eneuresis, Haematuria, failure to thrive.

INTRODUCTION:

Posterior urethral valve (PUV) is the commonest obstructive uropathy seen in male infants, children and adolescents with a broad clinical spectrum[1]. They are usually detected during infancy and may be rarely diagnosed with ease during late childhood, adolescence or even adulthood [2-7] . Not much is known about the presentation and outcome in older patients[8] . Bladder dysfunction and urination disorders are revealing symptoms [9,10]. Diagnosis should be made early to avoid renal damage.

The presenting symptoms and signs are those of bladder outlet obstruction straining at micturition, dysuria, poor urinary stream and abdominal distension with a palpable bladder [9-11] . Urinary tract infection, urinary ascites and respiratory distress may also be present[11].

In the adolescent and in the mild end of the clinical spectrum, the presentation may be delayed or may be very subtle. Eneuresis and haematuria may be the only symptoms [8,12,13]. These subtle features were the only presenting findings in our patient.

Case Report: MU is a six year old boy who presented at the paediatric surgical unit of UNTH, Enugu with history of nocturnal eneuresis (night time bed wetting). There was history of recurrent fever which responded occasionally to medications. There was also occasional haematuria and patient looked small for age. Prior to presentation at UNTH, there was positive history of visits to peripheral hospitals for complaints of bed wetting at night time and emaciation.

Clinical examination revealed a pale and mildly dehydrated young boy. There was supra pubic tenderness with dribbling of urine on supra pubic pressure. All other systems were essentially normal. A provisional diagnosis of urinary tract infection (UTI) was made. Obstructive uropathy was considered a probable differential diagnosis.

Micturating cystourethrography (MCU) revealed a dilated posterior urethra and bladder diverticulum (fig 1). The urethra distal to the level of the external sphincter showed a

narrow stream of contrast opacified urine. Intravenous Urography (IVU) revealed bilateral hydronephrosis and hydroureters (fig 2). Abdominopelvic sonography confirmed the above renal changes. Laboratory investigations revealed blood urea level of 58mg/100ml and Hb of 8gm.

Prophylactic antibiotics, stabilization of renal function and correction of fluid and electrolytes were achieved before open surgical ablation of the urethral valves were done. Patient was later discharged home in good health after bladder training.

DISCUSSION

Posterior urethral valve (PUV) with delayed or mild presentations such as this patient had has been rarely diagnosed based on these presentations. Even the most experienced clinicians have been known to miss the diagnosis. The more common symptoms and signs of patients with delayed presentation include diurnal eneuresis, voiding pain and urinary tract infection[8]. Less common signs and symptoms include poor urinary stream, haematuria and proteinuria [8]. At the mild end of the clinical spectrum, the symptoms and signs are, frequent diurnal eneuresis or nocturnal eneuresis, super- imposed infection and poor stream of urine[12]. In this group of patients, diagnosis is only established by strict correlation of the radiological findings as was done in our patient.

From literature, in patients with eneuresis resulting from urethral obstruction, posterior urethral valve accounts for less than 9% whereas bulbar urethral obstruction and distal urethral stenosis account for 75.3% and 14.7% respectively[13]. Our patient falls into the 9% group with the subtle presentation of nocturnal eneuresis, failure to thrive, occasional haematuria and recurrent fever as the only features of the hidden uropathy. In such cases, diagnosis is usually established after correlation with radiological and other urodynamic findings.

Micturating cystourethrography (MCU) and ultrasonography remain important methods of diagnosing this condition. Confirmation is by cystoscopy.

Intravenous urography may show secondary features of the distal obstruction, which include hydronephrosis and hydro ureters. These late features of chronic obstruction were gross in our patient.

The differential diagnosis based on radiological features may include other causes of urethral obstruction such as strictures, urethral polyps, prolapsed ectopic ureterocoele and congenital urethral diverticulum.

Complications of severe chronic renal impairment due to the high pressure obstruction can be averted in these cases of delayed presentation if early urodynamic studies are done [13].

Definitive management is by surgical ablation or endoscopic transurethral fulguration of the valves. This produces excellent results with a high degree of good cure.

CONCLUSION:

Nocturnal eneuresis in association with failure to thrive should be borne in mind as veritable subtle symptoms of a hidden uropathy due to posterior urethral valves in the adolescent. The suspicion for uropathy should be further sharpened by the presence of recurrent fever and occasional haematuria especially microscopic haematuria. The risk of progression to end stage renal disease, which is very high, can be reduced with raised index of suspicion and thus early radiological evaluation and relieving interventions in this small group of patients.

Fig. 1: Micturating Cysto-urethrogram showing dilated posterior urethra. Note the bladder diverticuli and the narrow stream of constrast opacified urine in the urethra distal to the obstruction.

Fig. 2 The Intravenous urogram shows bilateral hydronephrosis and hydroureters. The distal ureteric segments have been exteriorized (eterostonies) while awaiting surgery.

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