Scrotal Urinary Sinus Due to Posterior Urethral Valves in Children a Very Uncommon Presentation

Urvish R Parikh*

*Pediatric surgery, Rugved Multispeciality Hospital, Krishnanagar Bapunagar, Ahmedabad, India

Abstract

Hereby we reported a case of scrotal urinary sinus in a child which was operated three times outside. Patient was diagnosed as scrotal abscess and I&D were done three time. But at last patient came to us and diagnosed as Posterior urethral valve with reflux of urine into vas deference which developed into scrotal urinary sinus with the help of clinical examination, USG and voiding cystourethrography. Cystoscopy and posterior urethral valve fulguration improve patient condition.

Key words: Valves; Sinus; Testis

Introduction

Anatomical urinary tract abnormality may lead to recurrent urinary tract infection in children which also associated with recurrent epididymo orchitis in children, which also present as testicular abscess. Drainage of it may lead to scrotal urinary sinus if primary cause was not removed. Antenatal diagnosis of Posterior urethral valve (PUV) was confirmed by voiding cystourethrography in neonatal age group. Delayed diagnosis of PUV may lead to gross back pressure changes in bladder, ureter and kidney. But this unusual presentation of PUV as non healing scrotal urinary sinuses after epididymo-orchitis has been reported earlier by Narshimha KL in 2004 with patient of Down syndrome [1]. Two cases of scrotal urinary sinus is reported by Mark D in 1972 due to improper drainage of testicular abscess with epididymo orchitis [2]. Epididymo-orchitis is caused by retrograde flow of infected urine through the ejaculatory ducts due to high back pressure changes in obstructed posterior urethra. In infancy and in children association with PUV with scrotal urinary sinus is very rare.

Epididymitis may also lead to scrotal abscess which was miss diagnosed in our case previously and as urine has high back pressure and reflux in to vas deference this may lead to urinary sinus in scrotum.

History

A 3 year old male child came to our department with his relative give history of child was suffering for scrotal swelling since last seven days and pain over scrotum on left side. At present pus discharge over left scrotum base. Patient was operated for that in the form of I&D for three times with different surgeon. On presentation patient was septic with high grade fever, total count of WBC is high (22,000). His creatinine was border line (1.2). Urine routine and microscopic examination shows plenty of pus cells. Patient was admitted and IV antibiotic started and after 24 hour, USG was done which show cystitis, with collection in left scrotum and mild epididymo orchitis on right side with fullness in testis. On further examination we noticed watery discharge from previous operated side of I&D, and we suspect it was urine. So micturating cysto urethrograph was planned and which suggestive of posterior urethral valve, with dye passing in to both side of vas deference to epididymis and on left side extravasations of dye seen in MCU report (Figure 1). Planned cystoscopy was done and posterior urethral valve fulgurated with bugbee forces and catheter kept for four day. Meanwhile left scrotal discharge gone away and patient improved. After removal of catheter patient passed urine.
in stream and there was no urinary discharge from scrotum and swelling on opposite side of scrotum also become normal. On 7th day of discharge patient going well and his creatinine improve to 0.8 and no other complaint. Urine report also improved. Voiding cystourethrogram after 6month shows normal report with slight dilatation of posterior urethra without obstruction.

Discussion
Scrotal urinary sinus is rare presentation in children, and up till now in India only one case reported in 2004 [1]. But at international journal very few cases reported with literature available to us which show two case report in 1972 [2]. Patient presented with urine or some time pus discharge from scrotum which was not healed by any way. Some time they were present with scrotal swelling, which was diagnosed as testicular or scrotal abscess, which was drained and patient developed urinary sinus through scrotum. Most common cause of development of urinary sinus in scrotum is back pressure in vas deference due to blockage in urethra. In adolescent and in adult it occurs mostly after urethroplasty, stricture or post TURP in prostatic adenoma [3]. But in children of age group less than five year reflux in vas deference is rare and posterior urethral valve as a cause is also rare. The sever attenuation of prostatic tissue seen in congenital obstructions leads to loss of obliquity of the normal ejaculatory ducts as they enter the posterior urethra. Associated distal obstruction to the flow of urine may aid in the urethro-ejaculatory reflux of urine. If the urine is infected it may lead to epididymo-orchitis as it happened in our case. However this reflux must be very unusual as epididymo-orchitis is a rare association in PUV [1]. So diagnosis if this condition can be done with help of proper history taking, physical examination and with help of radiological investigation. Sonography help full as it show dilated posterior urethra in PUV, but drainage of urine in vas deference cannot be visualized in USG. This can be best done with 100% surety with voiding cystourethrogram [2,4,5]. Which show dilated posterior urethra, reflux of urine with dye in vas deference, and leaking of dye in scrotum from testis or epididymis.

After proper diagnosis cystoscopy with fulguration of PU valve helpful in resolution of symptoms and patient improve completely after that.

Conclusion
Scrotal urinary sinus with Posterior urethral valve is very rare in children age group and diagnosis with proper history and examination with good radiological investigation like voiding cystourethrogram which is the diagnostic investigation in this case can confirm the cause and treatment of cause may lead to improvement in child.

References