A Rare Case of Giant Penile Urethral Calculus

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Abstract: Urethral stones are commonly associated with urinary tract calculi and underlying diverticulum or stricture urethra. Urethral stones, however, are rare and account for only 0.3 to 2% of all urinary tract stones. The present case concerns a 55 years male patient who presented to our OPD with complaints of pain in the penis and burning micturition since 1 week. Patient had features of prostatism since 5 months. On examination, whitish discharge was noted from external urethral orifice. Careful palpation of penile region reveals a tender, hard mass of size 3.0x1.0 cm close to the urethral meatus. Passage of metallic probe per-urethrally confirmed the suspicion of a calculus in urethra. Calculus was removed under local anaesthesia by performing meatotomy and the calculus was gently detached and removed.

Keywords: giant urethral calculus, impacted urethral calculus, penile urethral calculus, meatotomy and anterior urethral stone

1. Introduction

Urethral stones are commonly associated with urinary tract calculi and underlying diverticulum or stricture urethra.¹ Urethral stones, however, are rare and account for only 0.3 to 2% of all urinary tract stones.²

Penile urethral stones are a rare occurrence with an incidence of less than 0.3% resulting from a many causes including migration of stones within the urinary tract, urethral strictures, and obstructive tumours like adenomatous metaplasia of the urothelium, hypospadias, urethral diverticulum, and very rarely primary fossa navicularis calculi.³

Giant urethral calculi are extremely rare.¹ Their impaction producing various symptoms ranging from dysuria to acute retention of urine is common presentation for surgeons, but bladder stone getting impacted in distal urethra and enlarging to a size > 5 cm is quite rare.⁵

The majority of urethral calculi occur in males and are rare in females.⁵ We are reporting an interesting case of a giant urethral calculus impacted in penile urethra.

2. Case Report

A 55 years male patient presented to our OPD with complaints of pain in the penis and burning micturition since 1 week. Patient had features of prostatism since 5 months. There was no history of any surgery in perineum or genitalia.

On examination, whitish discharge was noted from external urethral orifice. Careful palpation of penile region reveals a tender, hard mass of size 3.0x1.0 cm close to the urethral meatus. Digital rectal examination revealed enlarged prostate with no nodularity. X-ray pelvic region was suggestive of radio-opaque shadow in the penis. (Figure 1& 2.) Passage of metallic probe per-urethrally confirmed the suspicion of a calculus in urethra. Routine blood investigations and renal function tests were within normal limits. Urinalysis showed few pus cells. Urine culture didn't show any organisms. Ultrasound KUB was normal. Calculus was removed under local anaesthesia by performing meatotomy and the calculus was gently detached and removed (figure 3). Urethra was closed down in two layers, A 16 F Foley's catheter was left in situ for 7 days. The stone was measured 3.2x2 cm and weighted 19 grams. Patient made rapid and full recovery without any complications.

Figure 1: XRAY Penile Region Showing Radio Opaque Shadow

Figure 2: XRAY Pelvis Showing Radio Opaque Shadow

Figure 3: Calculus Measuring of About 3X 2 X 2 CMS
In an analysis done by Verit et al. in 2006 there were 15 patients studied, 8 of which were paediatric cases affecting the fossa navicularis. The stones were all fusiform shape and solitary. Kamal et al reported that 78% of all patients with urethral calculi had acute retention of urine, while 22% reported decrease of the urinary stream with dribbling of urine. 32 to 88% of the urethral calculi reside in the posterior urethra, whereas 8 to 58% are located in the bulbous and penile urethra and 4 to 11% are found at the fossa navicularis. 98 to 100% of urethral calculi are radiopaque and can be visualized on plain radiographs.

Management of urethral calculi varies according to the site, size and associated urethral diseases. Retrograde manipulation in urinary bladder followed by litholapaxy or lithotripsy is suitable procedure for small urethral calculi. Giant urethral calculi should be treated with open surgery. In meatal stones associated with stricture urethra (male), stones removal and urethroplasty are preferred. On follow up of four months showed no evidence of urethral stricture or recurrent stone in our patient.

References