



AN UNUSUAL CASE OF LARGE PENILE URETHRAL CALCULUS WITH URETHROCUTANEOUS FISTULA IN AN ELDERLY MAN.

Urology

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ABSTRACT

Impacted penile urethral calculus complicated with urethrocutaneous fistula is a rare condition. Such calculi can form as a result of urethral strictures, meatal stenosis, urethral diverticulum, and migration of stones from the proximal urinary tract. A 65 year old male presented to our emergency department with complaints of fever and urinary dribbling since 2-3 weeks and obstructive lower urinary tract symptoms since 6 months. He showed features of sepsis and a palpable bladder on examination. Xray KUB and penile USG was suggestive of a 2x1.5cm distal penile urethral calculus. In this paper we present our approach to such case.

KEYWORDS

Urethral calculus, Urethra-cutaneous fistula, Urethral stricture, Urethrotomy

INTRODUCTION:

Calculi in the urethra are uncommon, representing only 1–2% of all calculi in the genito-urinary tract. (1) Penile urethral calculi are an even rarer occurrence with an incidence of less than 0.3% (2), resulting from various causes including migration of stones from proximal urinary tract, urethral strictures, urethral diverticulum and obstructing tumours, hypospadias, and very rarely primary calculi of fossa navicularis. Long standing penile urethral calculi leading to urethrocutaneous fistula formation has rarely been reported in literature. Through this work, we attempt to gain clinicians' attention regarding urethral calculi complicated with a urethra-cutaneous fistula, a condition which has, so far, been under-reported.

Case Presentation:

A 65 year old gentleman presented to the ER of our hospital with complaints of pain and swelling over penis since 1 week and inability to void since 1 day. He gives history of urinary dribbling since 2-3 weeks and long standing obstructive lower urinary tract symptoms lasting more than 6 months. He also gives history of occasional purulent discharge from external urethral meatus since the past 2-3 days. He gave no history of previous urolithiasis/ lithuria/ urinary tract interventions. He was febrile to touch and his PR- 96bpm & BP- 100/60mmhg. On examination abdomen was soft with suprapubic tenderness and a palpable bladder which was dull on percussion was noted. On examining his external genitalia we noted BXO changes over glans and prepuce, with inability to completely retract the prepuce. Distal penile shaft was swollen and tender to touch. A hard mass was felt within the penis. Skin over the mass was edematous. A 0.5cm opening on the ventral aspect of distal penile shaft (fig 1,A) was noted that oozed pus on palpatory manipulation. Edematous changes were also noted over the scrotal wall. Bilateral testes were palpable. On per rectal examination there was no palpable prostatomegaly, anal tone was normal, bulbocavernosus reflex was preserved.

A plain X-ray of the kidney, ureter, and bladder (KUB)(fig 1,C), showed a huge stone in the region of the penile urethra and an abdominal ultrasound and urography showed distended bladder with bilateral hydronephrosis. The urine culture grew *Escherichia coli*, which was treated based on antibiotic sensitivity. The complete blood count revealed anemia and leucocytosis. Serum creatinine was elevated, 4 fold normal value. A supra-pubic cystostomy was done to divert the urine. Patient showed features of sepsis with inability to maintain hemodynamic parameters. Hence was shifted for further management under intensive care. The patient underwent urethrolithotomy under penile block with all aseptic precautions being followed. A ventral slit was given over the urethrocutaneous fistula to drain all the pus. The incision was deepened till we reached the

obstructing calculus of around 2x1.5cm size (fig 1,B). The calculus was removed and after adequate hemostasis and the site of impaction was marsupialised. The patient recovered from sepsis after the septic foci were removed. The scrotal edema also reduced.

Patient underwent RGU and MCU, suggestive of pan urethral obliteration probably due to long standing stricture disease (fig 1,D). The patient was discharged with SPC in situ, with aim to revert back after adequate optimisation of nutritional status for definitive procedure.



Figure 1: (A) Urethro-cutaneous fistula oozing pus; (B) Ventral urethrotomy to remove the calculus; (C) X Ray pelvis showing urethral calculus; (D) No evidence of contrast on MCU & RGU



Figure 2: 2x1.5cm urethral calculus

DISCUSSION:

Urethral calculi accounted for only 1–2% of the urinary tract stones. Urethral calculi that cause urethral fistula are extremely rare causing significant discomfort to the patient. Urethral calculi are either formed

in the urethra or migrate down from the upper urinary tract(3) . Primary native calculi are usually small and form in multiple numbers whereas secondary migratory calculi are usually large(4). Articles published earlier say that the size of the primary native urethral calculi ranged from 2-3 mm to 6 cm, larger calculi usually occur in the posterior urethra, and a small calculus is commonly found in the anterior urethra. However in this case a large calculus of 2x1.5cm size is found in distal penile urethra. The stones are formed in the urethra either behind some stricture or within a poorly drained communicating cavity, with an obstruction, stagnation, infection, and/or inflammation acting as the predisposing factor(5). The main symptoms include acute urinary retention, urinary frequency, a burning sensation in the urethra during urination, a burning sensation in the perineum, or a stinging perception in the anal/ perianal area. Other less common symptoms included haematuria, dribbling or incontinence, intermittency of urine stream, and a history of lithuria. Management of urethral calculi varied according to the site, size, and associated urethral disease. Retrograde manipulation into the urinary bladder followed by cysto-litholapaxy or endoscopic lithotripsy is a suitable procedure for small non impacted urethral calculi. Anterior urethral calculi can also be removed under local anesthesia by ventral urethrotomy as seen in our case where the patient was not stable to go under spinal/ general anesthesia. This case report identified some predisposing factors of urethral calculus complicated with a urethro-cutaneous fistula. Patients with this condition can be treated with the excision of the fistulous tract, retrieval of the urethral stones, and/or a debridement and pus drainage operation so as to tide over the sepsis and to do a definitive urethral reconstructive surgery at a later date . The complications seriously affect the quality of life and even cause more serious consequences, so clinicians should be aware of them & must create awareness amongst patient population.

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