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A Rare Case of a Giant Urethral Calculus in a Urethral Diverticullum

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Abstract:

A urinary calculus in the urethra is rarely seen and usually encountered in men with urethral stricture or diverticullum. Herein, we are reporting a rare case of a giant multiple calculus in the anterior urethra of a male patient with an acquired diverticullum. A 20-year-old male presented with continuous dribbling of urine for last one year and increased frequency of micturition. Retrograde Urethrogram (RGU) was done which revealed filling defects in a urethral

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diverticullum. Patient was operated with intra operative findings of urethral diverticullum with two large urethral calculus in the anterior urethra. Excision of the diverticullum with removal of the calculi and primary closure of the urethral defect was done. Patient was discharged on catheter on 3rdpost-operative day.

Key words: Urethral Calculi, Urethral Diverticullum

INTRODUCTION

Most of the urinary system stones are located in the upper urinary system. They are uncommon in the urethra [1,2,3], usually get formed proximally and get stuck in urethra or may rarely get formed primarily in urethra [2].Urethral calculi represent less than 1% of all urinary stone disease [3].Giant urethral calculi are even rarer. Most urethral calculi migrate from the urinary bladder. Urethral calculi may get formed primarily in the urethra proximal to a urethral stricture or in a diverticullum. The majority of urethral calculi occur in males [4] and urethral calculus is an extremely rare finding in females [1].Herein, we present a case of giant urethral calculi in a urethral diverticullum, impacted in the urethra of a 20-year-old male.

CASE REPORT

A 20-year-old, otherwise healthy male patient presented to the surgical outdoor with continuous dribbling of urine for last one year. He had also been complaining of a hard mass in the anterior perineum for the past 1 year. The patient had been having on- and-off history of increased frequency of micturition for one year. Patient has a history of road traffic accident with bladder and urethral injury and a pelvic fracture, 13 years ago. He underwent exploratory laparotomy and closure of bladder

injury with suprapubiccystostomy. A two-stage Urethroplasty was done, one year after trauma.

On examination, lower midline scare was present and another scare in the perineal region was present. Two hard mass of 2-3 cms and 3-4cms, respectively, were palpable in the anterior perineal region at the base of the scrotum. It was painless, causing mild discomfort only. General physical examination did not reveal any abnormality. Routine metabolic work-up and the renal function tests were normal. Urine culture did not show any growth. Levels of serum parathyroid hormone and serum calcium were within normal range. Digital rectal examination did not detect any abnormality. Plain X-ray of the pelvis showed two large calculi in the anterior urethra. Plain X-ray and ultrasound scans of the kidney, ureter and bladder area were all normal. Retrograde Urethrogram revealed a diverticullum in the anterior urethra with large filling defect. Urgent surgical removal of the stone was planned because of their large size. Urethro-lithotomy was done. Two large calculi were removed and diverticullum was excised. Urethra was closed primarily.

FIGURES:

Figure 1: Visible calculi in scrotal region

Figure 2: RGU showing anterior urethral diverticullum with filling defects.

Figure 3: Urethrotomy for removal of stone

Figure 4: Silicon catheter passed through the urethra

Figure 5: Specimen of calculi after removal

DISCUSSION

Urethral stones are encountered infrequently in urological practice and the studies published in the literature consist of small series and several case reports. Most of the urinary stones are located in the upper urinary system and urethral calculi as such are uncommon (1%) ([1,3]).Depending upon their site of origin, urethral stones are classified as (a) primary or autochthonous and (b) secondary or migrating ([5,6,7]). Secondary stones are more common than primary stones and have migrated from higher up in the urinary tract ([5,6,7,8]). Urethral calculi are usually small ([5,6]). Giant urethral calculi are rare. The majority of urethral calculi occur in males ([4]).

Urethral calculi may be completely asymptomatic or may be accompanied by one of the following symptoms: perineal or penile pain, frequency, urgency, diminished urinary stream, dribbling, hematuria or/and urethral discharge due to infection. The patient may present with acute retention of urine with insignificant past history. The diagnosis is based on clinical history and relevant investigations ([5,6,7,8]).

Management of urethral calculi varies according to site and size and associated urethral disease. Retrograde manipulation into the urinary bladder followed by litholapaxy or lithotripsy is a suitable procedure for posterior urethral calculi. Anterior urethral calculi can be treated with instillation of 2% lidocaine jelly or ventral meatotomy according to their

localization. Giant urethral calculi should be treated with open surgery. Besides, if the urethra has an associated stricture or has been damaged by prior attempts of extraction, stone removal and urethroplasty are preferable (3).

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