

A RARE CASE OF PRIMARY GIANT URETHRAL CALCULUS

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ABSTRACT

Urethral stones in adults are rare and usually encountered with urethral stricture or diverticulum. Herein, we report a 61 years old man who presented with a large urethral calculus impacted in bulbar urethra resulting from a post surgical complication of periurethral abscess. The patient presented with periurethral abscess and acute retention of urine. On examination hard dull aching mass of size 8cmx6cmx5cm was palpable at anterior perineum. The calculus was removed by external urethrotomy with two layer closure of urethra.

Key words Giant urethral calculus, Perineal urethrotomy, Impacted urethral calculus.

INTRODUCTION:

Urethral stones are commonly associated with urinary tract calculi and underlying diverticulum or stricture urethra.¹ Urethral calculi represent less than 1% of all urinary stone diseases. Giant urethral calculi are extremely rare.² The majority of urethral calculi occur in males and rarely in females.³ We are reporting an interesting case of a giant urethral stone impacted in bulbar urethra.

CASE REPORT:

A 61 year-old male presented in emergency room with acute retention of urine and painful swelling in scrotum extending to perineum. Patient reported a history of incision and drainage for periurethral abscess 12 years back. On physical examination a hard dull aching mass of size 8cmx6cmx5cm was palpable at anterior perineum. Urinary bladder was distended. Old scar mark was noted in perineum. General examination did not reveal any abnormality. Routine blood investigations and renal function tests were normal. Metabolic work up and serum parathyroid hormone and serum calcium were within normal range. Urine culture did not show any growth. X-ray pelvis showed a large calculus in the bulbar urethra (Fig I). X-ray KUB region and ultrasound abdomen were reported as normal. Calculus was removed under spinal anaesthesia by perineal

urethrolithotomy. It measured 75mmX50mmX40mm and weighed 82 gms. It was found impacted in bulbar urethra (Fig II). Urethra was repaired in two layers over Foley catheter which was removed after 21 days. Patient made rapid and full recovery without any complication.



Fig I: X-ray pelvis showing giant calculus in the urethra

DISCUSSION:

Urethral stones are rare form of urolithiasis accounting for less than 1% of urinary calculi, but have greater prevalence in developing countries.⁴ Urethral stones in general affect children more often than adults, due to the higher prevalence of bladder stones in this age group.⁵ Predisposing factors for in situ development of urethral stones include the presence of urethral diverticulum, urethral stricture, hypospadias and meatal stenosis.^{6,7} They are exceedingly rare in females because of low incidence of vesicle calculi and shorter urethra.⁸

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Fig II: Showing impacted urethral calculus after urethrotomy

Our patient underwent incision and drainage procedure for perineal abscess 12 years back. He could have developed stricture of urethra after healing of wound which resulted in urinary stasis, and triggered the production of a large stone proximal to the stenotic segment. During the early stages of stone formation, two factors may have prevented its elimination. Slow and altered urinary flow proximal to the narrow segment could not generate enough force to propel the stone distally. Secondly, gravity may have caused the stone to be retained within a dependent location in the pre-stenotic dilated segment of urethra, not allowing it to pass. The possibility of stone migration from the upper urinary tract with it subsequently becoming trapped within the urethra was considered unlikely as the patient denied any history of urinary colic and he was found to have no renal stones.

Depending upon the site of origin, urethral stones are classified as primary and secondary or migrating. Primary calculi are associated with urethral abnormalities such as stricture, diverticula, and foreign body. Secondary stones are more common than primary stone and have migrated from higher up in the urinary tract.⁹ Urethral calculi are mainly composed of struvite, calcium phosphate, or calcium carbonate. Primary stones do not cause acute symptoms, while migrant stones may present as acute retention, dysuria, dribbling, or sometimes sepsis in the presence of infection.⁹

Management of urethral calculi varies according to the site, size and associated urethral disease. Retrograde manipulation into the urinary bladder followed by litholapaxy or lithotripsy is a suitable procedure for small urethral calculi. Anterior urethral calculi can be removed with instillation of 2% lignocaine jelly, ventral meatotomy or urethroscopic method.¹⁰ Giant urethral calculi should be treated

with open surgery. In urethral stones associated with stricture urethra, stone removal and urethroplasty are preferable.⁷ The treatment of choice for an impacted, large calculus in the bulbar urethra is perineal urethrotomy with urethroplasty. Follow-up for one year showed no evidence of urethral stricture or recurrent stone in our patient.

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