

Case report

Giant bladder calculus with no retention of urine

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Abstract:

Benign prostatic hyperplasia often produces chronic and progressive lower urinary tract symptoms or complications such as bladder stone, leading to retention of urine and to seek medical attention. Becharetal¹ stated giant urinary bladder stone weighing 100 grams or more are uncommon. In our case 162 grams of bladder stone with few another stones about 10-15 grams in the left lower end of ureter were removed. Available treatment options for vesical calculus include open surgical removal, extracorporeal fragmentation and endoscopic crushing. Recently endo-surgical mechanical cystolithotripsy followed by percutaneous extraction has been in clinical practice for small and moderate sized calculus.

Key words: giant bladder calculus; bladder neck obstruction; urinary retention

DOI: <http://dx.doi.org/10.3329/bjms.v14i1.21573>

Bangladesh Journal of Medical Science Vol. 14 No. 01 January'15. Page: 98-99

Case presentation

A 59 year thin built married male patient, attended urology outpatient department with complaints of on and off increased frequency and urgency for last 6 years. Patient gave history of macrohematuria once in past 3 months. Patient did not give any obstructive symptom or retention of urine. Patient's general physical examination was unremarkable and per rectal examination revealed hard mobile mass above the prostate, the prostate size was small, non tender and fibrosed. Ultrasound revealed huge bladder calculus 8cm x 6.2cm with multiple acoustic shadows posterior to the main calculus with back pressure changes in left pelvi calyceal System. X-ray pelvis confirmed the findings of the ultrasound [Fig: 1].

Patient's routine investigations included complete haemogram, routine urine examination which showed 50 –60 pus cells and renal function tests which were within normal limits. Patient underwent intra venous urogram which confirmed the findings of ultrasound, with multiple stones in left lower ureter with back pressure changes. Patient was sub-

jected to CPE , with 17 F scope which revealed non obstructing prostate small prostate with tight bladder neck and huge bladder calculus, both ureteric orifices could not be seen, with mucosa oedema, bosselated bladder calculus had kept the stone above bladder mucosa at places [Fig : 2].

Prior to cystolithotomy and left lower ureterolithotomy under regional anesthesia, patient underwent Bladder neck incision endoscopically, incision was given at 5 and 7⁰ clock position and Foleys catheter was kept in for 7 days. Patient had uneventful recovery and he could appreciate remarkable difference in micturition in post op period after removal of the catheter.

Discussion

Bladder calculi account for 5 % of urinary calculi and usually occur because of bladder outlet obstruction, neurogenic bladder, recurrent urinary tract infections, foreign bodies or bladder diverticulum 1,2. Giant bladder calculus is a rare entity in present urological practice; males are more affected than females. Bladder stones left for long time can cause

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Figure 1: X-ray pelvis showed large calculus in the bladder

leukoplakia, erosion or even metaplasia. Patients usually present with recurrent urinary tract infections, hematuria or urinary retention. Although bladder stones are commonly observed with upper tract calculi and may rarely occur without association with upper tract stones. There are reports of formation of bladder stones around a foreign body, sutures, ruptured catheter balloon pieces, other objects introduced into the bladder which act as nidus for stone formation³ Stone in the urinary bladder has been reported around an arterial graft which was incorporated in the bladder⁵. Although studies have indicated that infection may not be the inciting factor in stone formation, but may play a major role in further stone formation³. Giant vesical calculus commonly presents with recurrent urinary



Figure 2: showed giant stone with spiky projections

tract infection, hematuria, inability to pass urine and latter on azotemia⁴. The majority of bladder calculi is radio opaque and is detected by plain radiograph; other investigations include ultrasound, CT-scan, magnetic resonance imaging although contrast-enhanced CT has a high sensitivity in detecting urinary tract stones, including uric acid stones. Although newer modalities available for removal of bladder calculus are in practice, which include electrohydraulic lithotripsy or ultrasound shockwave lithotripsy but it takes long time to flush out the fragments. It is advisable for giant bladder stones to do open surgery, which is regarded the best and removes the stone in one piece, without leaving any fragments behind, which would later on form a nidus for another stone formation.

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