

GIANT URINARY BLADDER STONE IN A NIGERIAN WOMAN PRESENTING AS URINARY INCONTINENCE; A CASE REPORT

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ABSTRACT

Giant bladder stone is a rare condition especially in women. Involuntary leakage of urine through the urethra is a rare pattern of presentation. This is a case report of a 51 year old woman with 230g urinary bladder stone mimicking urinary incontinence. The cause, management and review of literature are also discussed.

KEYWORDS: Giant Bladder stone, woman, urinary incontinence.

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INTRODUCTION

Bladder stones account for 5% of all cases of urolithiasis¹. In Nigerians, bladder stones account for 44.4% of urolithiasis². A giant bladder stone is defined as bladder stone weighing more than 100g³. The biggest bladder stone recorded in medical literature weighed 6294 gm, and was reported in England by Arthur⁴. In Africa, El-Fortia⁵ reported the biggest size of 420gm. Clinical presentations of giant bladder stone include: suprapubic pain, heaviness or mass, lower urinary symptoms (LUTS), acute urinary retention, hematuria, strangury or dysuria. Such stones may be asymptomatic, but diagnosed incidentally. It can also present with rare clinical features which make diagnosis and treatment very challenging. Involuntary leakage of urine per urethra is a rare pattern of presentation and thus, may be misleading in places where there is paucity of diagnostic facility and manpower. Giant bladder stones occur very rarely in women. This is attributed to shorter and wider urethra which normally aid easy flow of urine, passage of sediments and small stones. Common predisposing factors to giant bladder stones in women include passage of suture material through the bladder following pelvic or

gynecologic surgery⁶, neurogenic bladder and diverticular disease of urinary bladder⁷, foreign bodies including forgotten stents and urethral catheters⁸. In current urological practice, giant bladder stones are encountered uncommonly due to improvement in diagnostic tools. We report a case of giant bladder stone in our centre.

Case report

A 51 year old post-menopausal para5⁺¹ woman, with 4 living children, who presented at the urology clinic with complaints of involuntary leakage of urine per urethra of 2 months duration. This was insidious in onset, intermittent, not precipitated by straining, coughing or physical exertion. She had occasional urge to micturate and used about 2-3 sanitary pads to control urine leakage. There was history of prior lower abdominal discomfort of one year duration. No LUTS, hematuria, or dysuria.

No history of prior passage of stones in urine, chronic cough, necroturia, anorexia, weight loss, exposure to pelvic radiation or use of vaginal pessaries. She had emergency cesarean section 15 years ago in her 4th pregnancy for prolonged obstructed labour. Clinical examination revealed a middle aged woman, stable with normal vital signs. Abdominal examination revealed a midline sub-umbilical scar with no other significant findings. The vagina was atrophic with stenotic

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orifice precluding bimanual examination. The urethral meatus was normal with no obvious urine leakage with and without stress maneuver. Rectal examination was not contributory. A provisional diagnosis of urinary incontinence to rule out vesicovaginal fistula (VVF) was made. Investigations done, with results included: normal full blood count, normal electrolytes, axotemia and increased white and red blood cells in urine but no bacterial growth on urine culture. Abdominopelvic USS showed a huge spherical hyper-echoic structure in the bladder with posterior acoustic shadow, bilateral hydronephrosis with preservation of corticomedullary differentiation. IVU collaborated ultrasound findings with bilateral pelvicalyceal system dilatation and clubbing. No extravascular contrast extravasation noted.

A definitive diagnosis of obstructive uropathy with urinary incontinence secondary to a giant bladder stone was made. The patient had open suprapubic cystolithotomy under spinal anaesthesia with extraction of a giant bladder stone measuring 8.2cm X 6.0 cm X 5.6 cm and weighed 230g. Intraoperative intravesical dye injection showed no vaginal spillage. The post-operative period was uneventful. She had complete resolution of urinary incontinence and biochemical normalization of renal function up to 4 weeks follow-up visit but lost to follow up thereafter.

Figure 1: Clinical Picture of Giant Bladder Stone in Index Case.



DISCUSSION

Urinary bladder stones although fairly common among Nigerians², its giant type is rare especially among women. In Taiwan, Sheng-Tsun Su et al⁶ in 2009 reported encrusted bladder stone on non-absorbable suture after a caesarian section. This predisposing factor is most probable in our patient who had emergency surgery for complicated labour. However, no obvious non-absorbable suture was seen in this patient intraoperatively and complete analysis of extracted stone was not done at the time of this report. Inadvertent passage of suture through urinary bladder can form a nidus for progressive layering of calcified matrix with subsequent formation of giant stone. Clinical presentation of bladder stones is also variable. Atypical mode of presentation such as involuntary leakage of urine with no significant clinical sign as seen in our reported case may pose a diagnostic dilemma.

This may be explained by the pressure effect of the stone on the short urethra, wedging it wide open. Radiological investigations; pelvic ultrasound and intravenous urography are very helpful in diagnosis of this condition and its associated complications, as was applied in our case. Nichols and Lower⁹ reported cystoscopic examination to be the surest method of detecting vesical calculi. However, its role in complete diagnosis of giant bladder stone may be limited considering stone size and tendency of being impacted or forming cast of the bladder thus preventing further access beyond neck of urinary bladder.

Open suprapubic cystolithotomy is the gold standard of treatment for giant bladder stone. Masa Hayase et al¹⁰ however reported a case of giant bladder stone removed transurethrally in one piece from an 87year old woman. In our case, open method achieved complete stone removal with total resolution of symptom 4 weeks following surgery.

CONCLUSION:

Giant bladder stones, although rare in modern urological practice, should be considered a differential diagnosis in women presenting with urinary incontinence. Open cystolithotomy is the recommended care for the large stone burden and its complications.

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