

Open Cystolithotomy for Giant Intravesical Stone: A Case Report

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ABSTRACT

Introduction: Huge bladder calculi in present day urological practice is rare due to awareness, early presentation and avoidance of aetiological factors ranging from diet and anatomical abnormalities just to mention a few. **Aim:** To report a giant intravesical stone, which turned out to be the biggest seen in the region of Nigeria. **Method:** A 67 years old male farmer who presented with lower urinary symptoms of one year duration and inability of passing urine of 6 hours prior to presentation. A clinical diagnosis of benign prostatic enlargement and urethral stricture was made following clinical and radiological investigations of ultrasound scan and urethrogram. X-ray revealed a huge calcific density occupying the whole of the bladder. Patient's electrolyte, urea, and creatinine (E/U/Cr) were deranged. **Results:** Patient subsequently had a direct vision internal urethrotomy for urethral stricture and an open cystolithotomy for huge bladder stone with dimension of 22 cm by 16 cm which weighed 2.1 kilograms. In the same surgery an open prostatectomy was done. **Conclusion:** This case report revealed that the giant bladder calculi grew to this size because the patient delayed his treatment due to financial constraints. For better outcome early presentation to the urologist remains key to favorable outcome.

Keywords: Cystolithotomy, Intravesical stone, Urethrotomy, Benign prostatic, Urethrogram

INTRODUCTION

The incidence of bladder stones in western countries is relatively low compared to developing countries, basically due to dietary effects. Giant vesical calculi weighing more than 100 gm are rare [1]. Of the reports written in English, fewer than 85 involve a stone more than 100 gm, almost all of the articles published in Pubmed are about giant bladder stones that developed secondary to infravesical obstruction.

CASE PRESENTATION

A 67 years old farmer presented with lower urinary tract symptoms like frequency, urgency, nocturia, splaying of urine, urge incontinence, intermittency and residual urine of 1 year duration, and difficulty in passing urine for 8 months. Patient also had a history of passage stones per urethra on two occasions. A clinical diagnosis of benign prostatic enlargement and urethral stricture was made much earlier but surgery was deferred due to financial constraints. Patient's electrolyte, urea,

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and creatinine (E/U/Cr) were deranged and X-ray revealed huge bladder calculi, ultrasound scan of the pelvis revealed prostate enlargement. Urethrogram showed calculi and passable urethral stricture. Patient subsequently had a direct vision internal urethrotomy for urethral stricture and an open cystolithotomy for

huge bladder stone with dimension of 22 cm by 16 cm which weighed 2.1 kilograms as shown in Figure 1. A view of intraoperative finding of the huge stone is depicted in Figure 2. In the same surgery an open prostatectomy was done. There after patient was discharged home on his 15th post-operative day in the good clinical state. Patient's electrolyte, urea and creatinine returned to normal 3 weeks post-surgery. Patient's prostate histology was benign prostate hyperplasia.



Figure 1: Weight of stone is 2.1 kg.



Figure 2: Intraoperative photo of the huge intravesical stone delivered.

DISCUSSION

A urinary bladder stone is usually defined as a giant calculus when its weight is > 100 g [1]. A giant bladder stone is a rare finding in contemporary urological practice. The incidence of urolithiasis in developed country is between 4 to 20% which often results from urinary tract infections, neurogenic voiding dysfunction, bladder outlet obstruction and foreign body [1]. Only 5% of these calculi affect the lower urinary tract, the bladder or the urethra. Common causes of bladder outlet obstruction include an enlarged prostate, urethral strictures and medication side effects. Pelvic surgeries and

genital prolapse, resulting in obstruction, foreign bodies such as Foley catheter, hair and even intravaginal accessories have been implicated as causes for bladder stones in females [2]. These stones are mainly composed of calcium oxalate, calcium phosphate, and ammonium urate [3]. Aside from the UTI, the predisposing factors that may have caused the bladder stone in the present case were unique. This patient resides in a very remote, inaccessible village that lacked a basic medical diagnostic facility with X-ray and ultrasound technology which should have been used and detected the stone earlier. The patient also was poor and as such could not afford proper healthcare. These factors probably compounded the UTI and resulted in the formation of the giant calculus. This patient had some urethral stones which were removed during the direct vision internal urethrotomy. Small stones less than 5 mm usually pass spontaneously [4]. Bladder calculi are usually solitary but may develop in multiple stone due to stasis [5]. The common presentation of patients with giant urinary bladder stones includes painful micturition, urinary incontinence, haematuria, pyuria, recurrent UTI, suprapubic pain and urinary retention [6].

CONCLUSION

This case report revealed that the giant bladder calculi grew to this size because the patient delayed his treatment due to financial constraints. Giant bladder stones are satisfactorily removed via cystolithotomy, however attempts have been made using cystolithotripsy. Early presentation to the urologist and availability of adequate health insurance will greatly reduce the incidence of giant bladder stones.

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