

## Case Report

# Giant vesical calculus

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### ABSTRACT

Author presented a case report of a 42-year-old male patient who presented with dysuria, heaviness in lower abdomen since last 3 years associated with pain over bilateral lumbar region since 2 years. He had history of recurrent urinary tract infection for last 6 months with blood in urine occasionally. Routine urine examination detected red and white blood cells with culture growth of *E. coli*. Ultrasound of abdomen confirmed the presence of vesical calculus of 10x7x5 cm.

**Keywords:** Case report, Giant vesicle calculus

### INTRODUCTION

Bladder stones are the most common manifestation of lower urinary tract lithiasis, currently accounting for 5% of all urinary stone disease and approximately 1.5% of urologic hospital admissions.<sup>1</sup> Bladder calculi in non-endemic areas are typically found in adults and almost always in association with other disease processes resulting in urinary stasis or the introduction of a foreign body like foley balloon fragments, silk sutures and fragments of clothing.<sup>2,3</sup> Bladder stones may also be seen in patients who had undergone radical cystectomy for invasive bladder cancer with neo-bladder reconstruction<sup>4</sup>. Primary bladder calculi are more common in children exposed to low protein, low phosphate diets. These rarely recur after treatment. Secondary bladder calculi are generally associated with bladder outlet obstruction. Also, its seen that when an IUD has moved into the bladder it usually becomes either partially or totally encrusted with calculus.<sup>5,6</sup>

### CASE REPORT

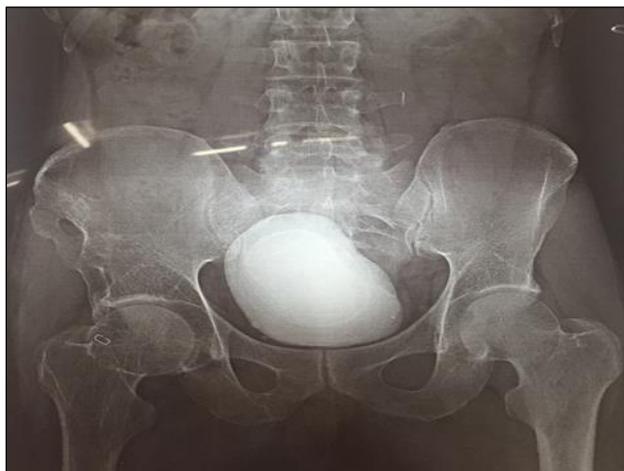
A 42 year old male patient presented with dysuria, heaviness in lower abdomen for the last 3 years

associated with pain over bilateral lumbar regions for 2 years. He had a history of recurrent urinary tract infections for the last 6 months for which he took medical treatment many times. There was history of passage of blood in urine occasionally since last 6 months. On examination, a non-tender, firm lump was palpable in the hypogastric region. Routine examination of urine detected multiple RBCs and WBCs and the urine culture grew *E. coli*. Ultrasound of abdomen confirmed the presence of vesical calculus of 10x7x5 cm.



**Figure 1: USG of giant vesical calculus.**

Plain radiograph of the KUB region showed a large radio-opaque shadow in the pelvis in the urinary bladder region. No abnormal radio opacity was observed in the renal region on plain roentgenography.



**Figure 2: X-ray of giant vesical calculus.**

Cystoscopy showed an oval urinary bladder stone. Suprapubic extra-peritoneal cystolithotomy was done and a yellowish-brown hard stone weighing 500 gm, with smooth surface was removed.



**Figure 3: 10x7x5 cm stone removed from urinary bladder.**

Urinary bladder wash given, and bladder was closed in two layers after putting a 22 F supra-pubic, 18 F per urethral catheter and a pelvic drain. Post-operative recovery was uneventful. SPC removed after 3 days and catheter removal after 10 days. Patient was discharged in satisfactory condition on post op day 2.

## DISCUSSION

Bladder calculi is common manifestation of genitourinary calculus disease<sup>1</sup>. They are usually seen in older men and occur because of infra vesical obstructions such as prostate hyperplasia, neurogenic bladder, urinary tract infection (UTI), foreign bodies, anti-incontinence surgery in woman and rarely pregnancy can also be a

predisposing factor for bladder calculus. Giant vesical calculus is universally uncommon (1), and there are only a few case reports of stone weighing more than 500 gm. Most common causes include urinary tract infection due to bladder outlet obstruction leading to stasis, encrustation around a foreign body, neurogenic bladder, diverticulum, and long-term catheterisation<sup>2</sup>. Here we report such a rare case as giant vesical calculus where there was no obvious predisposing factor. It is thought that a giant vesical calculus develops from a nidus of infection or a single ureteric stone with progressive layer wise deposition of calculi matrix. There are reports highlighting migration of IUD in urinary bladder with resultant calculus formation. The clinical appearance of migrations may be insidious and therefore the condition may remain undiagnosed for several years. Another source of formation of foreign-body bladder stones is frequent use of clean, intermittent catheterisation. Patients with clean, intermittent catheterisation can have stones with hairs as the nidus for encrustation.<sup>7</sup> Bladder stones may cause unilateral or bilateral hydronephrosis.<sup>8</sup> Malnutrition has been attributed to formation of primary bladder stones which is still common in developing countries where malnourishment is common especially in growing children.

In the era of laparoscopic and robotic surgery, the purpose of presenting this case is that there is still lack of awareness and medical facilities resulting in delay in diagnosis and formation of such big stones where open surgeries still have a role.

## CONCLUSION

This case report emphasizes that, in a patient with lower abdominal pain and recurrent UTIs, a bladder stone must be considered in differential diagnosis and the patient must be evaluated with radiological investigations. Treatment of large bladder stones differ in a way that they may require open surgery as compared to small bladder stones that can be managed endoscopically.

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