

Giant Bladder Calculus

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ABSTRACT

We present a case of a 28-year-old male who presented with complaints of continuous urinary incontinence and a lower abdominal lump over a few months. The X-ray KUB showed a large radio-opaque shadow occupying the entire urinary bladder, suggestive of a calculus. A suprapubic cystolithotomy was done. The calculus weighed 1064 grams and had a size of 13.2 cms x 10 cms x 9 cms. Giant bladder stones are an extreme rarity these days. This, we believe, is the largest bladder stone in terms of volume and weight reported in recent times.

CASE REPORT

A 28-year-old emaciated young adult male presented to us with complaints of continuous incontinence and a lump in the lower part of the abdomen over a 3-month duration. He had stopped passing urine in a stream for the last 6 months. There was an episode of hematuria 2 years ago. On examination, he was found to have a hard, large oval lump in the suprapubic region. The prostate was not enlarged but the lump was palpable, per rectally, as a hard mass. His urine examination revealed microscopic hematuria and few pus cells. His renal profile was marginally deranged; creatinine was 2.4 and blood urea was 65. The ultrasound showed a large calculus occupying the entire bladder and bladder wall thickening. The kidneys and ureters were normal. Metabolic workup did not reveal any abnormality. Cystoscopy was attempted but we could not enter the bladder as the calculus was occupying the bladder completely. However, there was no stricture in the urethra or any bladder outlet obstruction. We performed a suprapubic

cystolithotomy. The bladder was opened by a cruciate incision. The calculus adhered to the bladder wall at places. However, it could be removed in toto. Recovery was uneventful. One month after surgery, an ultrasound showed a normal bladder wall but 170 mL of residual urine. The patient was advised self-catheterization twice daily. At a 1-year follow-up, he was doing well and the residue had come down to 100 mL. The creatinine was normal.

DISCUSSION

Bladder stones were very common in the last century; however, giant stones weighing more than 100 gm and larger than 10 cm in dimension were not common even then. In recent times, such stones have virtually disappeared from modern literature [1]. The largest stone reported to date measured 10.4 cm in its maximum dimension. This was almost 35 years ago [2]. The common causes of bladder stones are bladder outlet obstruction, recurrent cystitis, bladder

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Figure 1. X-ray KUB showing the calculus appearing like a full cystogram.

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Figure 2. Calculus anterior view.

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diverticuli, intravesical foreign bodies, neurogenic bladder, and hyperparathyroidism [3]. With the passage of time, increased awareness and easy accessibility to medical devices has led to early diagnosis of all these predisposing conditions and, consequently, there is a steep decline in the incidence of primary bladder stones. Stones attaining a giant size is practically an unseen phenomenon now [4]. Bladder stones forming in the absence of underlying uropathy are termed primary or endemic bladder stones [5].

Our patient presented with a large suprapubic, hard abdominopelvic lump resembling a distended and obstructed urinary bladder. The stone had grown as big as the bladder

could possibly distend and accommodate with no space remaining for urine storage. Consequently, he had continuous incontinence. It was huge and it appeared like a contrast filled urinary bladder on X-ray KUB. The size of the calculus did not permit us to even contemplate using any modern modalities of treatment for removal of this calculus. We successfully removed it by simple cystolithotomy. Chemical analysis of the drilled-out specimen showed the composition to be magnesium, ammonium phosphate, and carbonate apatite.

The pathogenesis of the stone formation in our patient remains uncertain. Having ruled out any obstructive, metabolic, or neurogenic causes, we conclude that it was a primary or endemic bladder stone that went unnoticed during childhood and progressively increased to the present size.

Figure 3. Calculus lateral view.

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