

# Infravesical obstruction results as giant bladder calculi

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## Abstract

A 48-year-old man was hospitalized with the chief complaints of lower abdominal pain, pain during micturation and pollakuria. Plain radiography showed 2 giant bladder stone shadows: one as 6.0 × 5.0 cm and the other one 5.0 × 5.0 cm in size. Cystolithotomy was performed. The first stone weighed 400 g and measured 6.0 × 5.0 × 6.0 cm in size, and the other stone was fragmented to smaller particles with pneumatic lithotripter. Although a bladder stone is not rare, this case is interesting for 2 huge bladder calculi that were completely obstructing the bladder outlet and observed several years following pelvic trauma. To the best of our knowledge, our patient represents one of the largest bladder stone cases reported to date.

## Case report

We present a 48-year-old man visited our clinic for recurrent urinary tract infection and lower abdominal pain. Patient had a history of traffic accident injury which resulted as surgical fixation for pelvic trauma at the age of 12. He has had lower urinary tract symptoms including urinary frequency, urgency, voiding difficulty, small caliber of urinary stream, lower abdominal pain and urinary intermittency. His physical examination was normal and plain radiography revealed 2 huge pelvic calculi: measuring 6.0 × 5.0 cm and 5.0 × 5.0 cm, respectively (Fig. 1). Blood urea nitrogen and serum creatinine levels were 18, 2 and 1.09 mg/dL, respectively. Our patient's preoperative neurological examination was normal and there were no signs of neurogenic bladder. Therefore, videourodynamic evaluation was not indicated preoperatively or postoperatively.

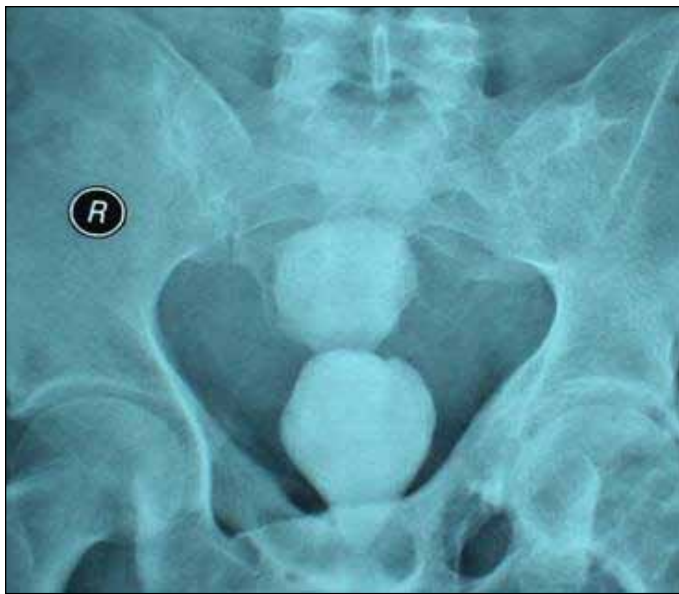
After treating the urinary tract infection with intravenous antibiotics, open cystolithotomy operation was planned. Our patient underwent cystoscopic examination before open surgery on the same operative day. No anatomical urethral obstruction was observed and we observed a dilated pos-

terior urethra. Bladder neck was fibrotic and high; bladder neck incision with cold knife was performed endoscopically just previous to the open cystolithotomy operation. During the cystolithotomy operation, pneumatic lithotripter was used to remove one of the stones which completely obstructed the bladder outlet as it was severely adherent to the bladder mucosa. The first stone weighed 400 g, and measured 6.0 × 5.0 × 6.0 cm in size, and the other stone with the similar size was fragmented to smaller particles with pneumatic lithotripter and extracted (Fig. 2). Both stones had 4 compartments of stratified lamellae composed of calcium phosphate and magnesium ammonium phosphate.

The postoperative period was uneventful. Urethral catheter was removed on the first postoperative week and the patient's urinary output was normal. The patient was discharged on postoperative day 8. He was evaluated in the outpatient clinic on the first month after the operation and no residual bladder stone or urinary system dilatation was detected. Uroflowmetry was also normal.

## Discussion

Bladder calculi account for 5% of urinary calculi and usually occur because of bladder outlet obstruction, neurogenic voiding dysfunction, urinary tract infection or foreign bodies.<sup>1,2</sup> Massive or giant bladder calculus is a rare entity in the recent urological practice. Males are more affected than females. Bladder calculi are usually observed secondary to bladder outlet obstruction. These patients generally present with recurrent urinary tract infection, hematuria or urinary retention. Although bladder stones are commonly observed with renal or ureteral calculi, they may rarely occur without associated upper urinary tract calculi as in our case.<sup>1</sup> This case is interesting for 2 huge bladder calculi that were completely obstructing the bladder outlet and observed after several years following pelvic trauma. To the best of our knowledge, our patient represents one of the largest bladder stone cases reported to date.



**Fig. 1.** Two huge pelvic calculi seen in direct graphy.

## Conclusion

The diagnostic methods of bladder calculi include plain radiography, ultrasound scan and CT scan. Satisfactory results can be achieved following surgical intervention by cystolithotomy or endoscopic cystolithotripsy.<sup>1,3</sup>

**Competing interests:** None declared.

This paper has been peer-reviewed.



**Fig. 2.** A 6 × 5 cm bladder stone was extracted by open vesicolithotomy. Other stone that had a similar size was fragmented using pneumatic lithotripter and extracted as smaller particles during the operation.

## References

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