

Case Report

A rare delayed presentation of giant vesical calculus: the largest vesical calculus to be reported in a female

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ABSTRACT

Vesical calculi are infrequent in females, and the occurrence of giant vesical calculus is even rarer. We report a case of giant vesical calculus in an elderly female which was undiagnosed and empirically treated for six years for recurrent urinary tract infection. On presentation, it was managed by open cystolithotomy. Upon surgical retrieval, the stone measured 11x7.5x7.4 cm in largest dimensions and weighed 672 gm, which to the best of our knowledge, is the largest vesical calculus to be reported in a female patient. This case highlights the need for adequate evaluation of every case of recurrent urinary tract infection with good imaging. Early diagnosis allows for the management of vesical calculi by minimally invasive endoscopic techniques. If missed, it leads to the formation of giant vesical calculi, which require treatment by a much more invasive open surgical approach.

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INTRODUCTION

Vesical calculi are infrequent in the female population, and the occurrence of a vesical calculus which weighs greater than 100g has rarely been reported in the literature.¹ In the absence of predisposing factors such as urinary stasis or a foreign body, the aetiology of a vesical calculus becomes uncertain. Terminal gross hematuria with a sudden voiding stoppage is a common sign of a large bladder calculus.² However, the spectrum of symptoms ranges from asymptomatic to lower abdominal pain, dysuria, frequency, gross hematuria or urinary retention making the diagnosis challenging, especially in rural areas with limited access to healthcare facilities.³

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DISCUSSION

Vesical calculi commonly occur secondary to urinary stasis but can also be seen, albeit infrequently, in healthy individuals without anatomic defects, foreign bodies,

strictures or urinary tract infections.² Kumar et al reported a total vesical stone burden of 1400 gm, including. The 42 stones in a twenty-five-year-old male patient who underwent augmentation ileocystoplasty for pelvic fracture distraction urethral injury with concomitant rectourethral fistula.⁴ Most of the giant vesical calculi have been reported in males.⁵⁻⁸ However, in women, giant vesical calculi are very rare, possibly because of a shorter urethra and low prevalence of bladder outlet obstruction in comparison to men.⁹

Vesical calculi are often associated with incomplete bladder emptying symptoms, although a combination of other urinary symptoms, such as terminal hematuria, suprapubic pain, weak stream, dysuria, etc., can also be present. A common sign of a large vesical calculus is terminal hematuria with a sudden voiding block, but it is not universal. Although a distended bladder could be palpable in some cases, the stone per se is typically not palpable. Due to the lack of specific signs and symptoms, a definitive diagnosis without imaging or cystoscopy is not possible.² Certain systemic complications can occur in a later stage with giant vesical calculus, such as bilateral hydronephrosis and acute renal failure with resultant secondary effects of azotemia. Wei et al reported a 39-year-old man who presented with symptoms of azotemia and acute renal failure as a sequela of giant vesical calculus weighing 450 gm which was undiagnosed for ten years.⁸

Nugroho et al reported a case of giant vesical calculus weighing approximately 800 gm in a male patient who presented with recurrent urinary tract infections for two years.⁷ In our case, the patient presented with predominantly storage lower urinary tract symptoms with no voiding symptoms or visible hematuria. This led to her being treated empirically for uncomplicated acute cystitis on multiple occasions and refrained her from seeking further medical care due to temporary symptom relief.

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CONCLUSION

The incidence of a giant vesical calculus in females is a rarity, seldomly seen nowadays in the modern era of diagnostic facilities. Clinical presentation of a vesical calculus can be ambiguous, demanding high suspicion and early use of basic diagnostic imaging modalities. Even in the current era of advanced endourology and minimally invasive surgery, open cystolithotomy is still advisable for such cases of giant vesical calculi.

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