

## Case Report

## Numerous Bladder Stones

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## Abstract

An 83-year-old man with benign prostatic hyperplasia and several comorbid conditions presented with irremovable urethral Foley catheter. Plain abdominal X-ray revealed a bladder full of stones. The patient had bilateral hydronephrosis and elevated serum Creatinine level. Open vesicolithotomy was done and more than 720 stones in various shapes and sizes was removed. After removal of stone, Creatinine gradually decreased from 4.9 to 1.8 mg/dl and most of lower urinary tract symptoms were alleviated in the follow-up.

Keywords: Benign prostatic hyperplasia, bladder stone, vesicolithotomy

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## Introduction

The bladder stone disease has been a cause of significant morbidity for human for thousands of years, accounting for 5% of all urinary stone disease.<sup>1</sup> Bladder calculi have different etiologies including primary and secondary causes; most of these stones are secondary to bladder outlet obstruction. Benign Prostatic Hyperplasia is common and may lead to bladder stone formation.<sup>2</sup> Male patients are affected to bladder stone more than females. Patients with bladder calculus manifest with hematuria, recurrent urinary tract infection and/or urinary retention. The bladder stone is an uncommon disease, however bladder stones with the weight of more than 100gr are even rarer.<sup>3</sup> Here, we report a case with large number of bladder stones, which were removed by open vesicolithotomy.

## Case Report

An 83-year-old man was referred with inability to remove the urethral Foley catheter, suffering LUTS for several years. Urethral catheter has been inserted three weeks ago, due to urinary retention. The patient had a history of diabetes, ischemic heart disease (IHD), as well as colectomy and chemotherapy for colon cancer. He also had a recent established Pulmonary Thrombo Emboli and IVC filter insertion.

Physical examination revealed moderate enlargement of the prostate and conjunctiva paleness, without any other positive findings. Total PSA (prostate specific antigen) was 4ng/ml and serum Creatinine was 4.9 mg/dl. Initial abdominal evaluation by X-ray disclosed a huge number of stones in the bladder (Figure 1). Bilateral hydronephrosis, bladder wall thickening and large amount of stones filling all bladder space were detected on ultrasonography.

After preoperative stabilization, the patient underwent suprapu-

bicvesicolithotomy under spinal anesthesia. Surprisingly, more than 720 pieces of stones (greater than 3 mm) in various shapes and sizes were removed with 470 cm<sup>3</sup> volume and 482 gr weight (Figure 2). Stone composition analysis was mainly uric acid. After stone removal, Creatinine gradually decreased from 4.9 to 1.8 mg/dl and the patient discharged from the hospital on the 4<sup>th</sup> day. After 7 days, cystostomy catheter was removed and the patient had no complaint.

## Discussion

The most common etiology of bladder stones is secondary to foreign bodies and bladder outlet obstruction. These conditions due to incomplete emptying and growing of retained stone fragments are the most common predisposing factors for bladder stones in non-neurogenic bladders.<sup>4</sup>

The most common presenting symptom of bladder calculi is terminal macroscopic hematuria, which is commonly accompanied by irritative lower urinary symptoms. Suprapubic discomfort or pain may or may not be present. Larger stones tend to cause fewer symptoms, likely due to restricted movements in the bladder. In small or moderate-sized stones, endoscopic procedures such as optical vesicolithotripsy have an extra advantage as they can be carried out along with the corrective procedures for underlying causes of bladder outlet obstruction.<sup>5</sup>

Although, new minimally invasive techniques are commonly used for bladder stones, in this setting the classic open vesicolithotomy through an extra peritoneal incision of the lower anterior bladder wall was preferred. This approach has been advised for intravesical enlargement of prostate with large bladder stones.<sup>2</sup>

In conclusion, this case report has presented a rare occasion of large number of bladder stones in a patient with benign prostatic hyperplasia. The review of literature has been disclosed patients with giant bladder stones and there is a few reports of numerous bladder stones.<sup>1-4</sup> To the best of our knowledge, this is the first case report that presents the greatest number of bladder stones.

**Conflict of interest:** Authors declare that there is no conflict of interest.

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Figure 1. KUB demonstrated full of stone bladder

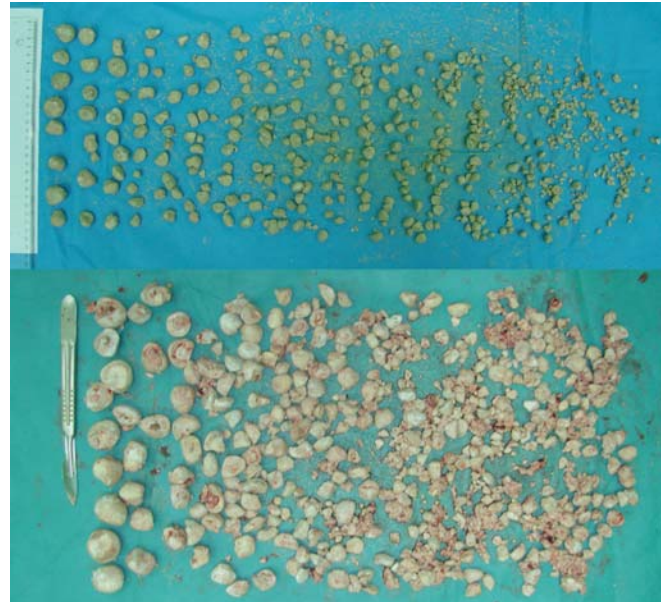


Figure 2. Bladder stones

## References

1. Horsnell JD, Kinder RB. A vesicocutaneous fistula secondary to bladder calculi in a patient with spina bifida. *JSCR*. 2010; 6: 4.
2. Ketabchi AA. Giant Benign Prostatic Hyperplasia with Large Bladder Stones: A Case Report. *Clin Case Rep*. 2012; 2: 10. doi: org/10.4172/2165-7920.1000167.
3. Agarwal A, Sigdel GSRKC, Shrestha P, Belokar WK. A unusual case of 356 vesical calculi. *Journal of College of Medical Sciences-Nepal*. 2012; 8(1): 44 – 47.
4. Schwartz BF, Stoller ML. The vesical calculus. *UrolClin North Am*. 2000; 27(2): 333 – 346.
5. Asci R, Aybek Z, Sarikaya S, Buyukalpelli, Yilmaz AF. The management of vesical calculi with optical mechanical cystolithotripsy and transurethral prostatectomy is it safe and effective? *BJU Inter*. 1999; 84: 332 – 336.