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

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 Trumbo 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 suprapubicvesicolithotomy under spinal anesthesia. Surprisingly, more than 720 pieces of stones (greater than 3 mm) in various shapes and sizes were removed with 470 cm3 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 4th 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.

The most common presenting symptom of bladder calculi is terminal macroscopic hematuria, which is commonly accompanied by irritative lower urinary symptoms. Suprapubicdiscomfort 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.

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.

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. 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.
References