



A case report of sub-mucosal bladder stone

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Bladder stones represent 5% of urologic stones. We report a 45-year old woman referred to our office with occasional supra-pubic pain for three months. Ultrasound of abdomen and pelvic showed a 20 mm stone in bladder. Abdominopelvic CT with intravenous contrast revealed no genitourinary abnormality. In cystoscopy, we detected a mucosal bulging on the left lateral wall of the bladder. Its mucosa was intact. Then we incised on the mucosa with cautery and extracted the stone. Sub-mucosal bladder stone could be developed in even normal women without any background illnesses.

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Introduction

Bladder stones represent 5% of urologic stones. Bladder stone could be primary in cases without functional, anatomic, foreign body, infectious or any other underlining disease. Secondary bladder stones are due to bladder or urethral ailments (1, 2). We had a 45-year old woman referred to our office with occasional supra-pubic pain for three months. She has no urolithiasis history with two natural vaginal delivery 20 and 25 years ago and a recent appendectomy at adolescence. She never has intra-uterine device or any gynecologic surgery. Ultrasound of the abdomen and pelvic showed a 20 mm stone in the bladder. Other urogenital organs were normal. Urinalysis demonstrated 5-6 WBC and urine culture was negative. As female bladder stone is uncommon, abdominopelvic spiral CT (computerized tomography) was performed that showed a stone density in the left posterolateral wall of the bladder (Figure 1). The patient had pain and also stress about the identified bladder stone, thereby the surgery was conducted. In cystoscopy, we detected a mucosal bulging on the left lateral wall of the bladder (Figure 2). Its mucosa was intact. Then we incised on the mucosa with cautery and extracted the stone. Afterward it was extracted with cystolitholapaxy through urethra. Foley catheter was removed on the seventh day. Pain of the patient was disappeared following stone excision. The stone composition was calcium oxalate 50%, calcium hydrogen

phosphate 40% and remaining 10% as undetermined using Fourier transform infrared spectroscopy.

Discussion

Hematuria, stranguria, frequency and lower abdominal pain are the common symptoms of bladder stones (3). However many bladder stones have been found incidentally without any symptoms. Sub-mucosal stone may be the consequence of bladder diverticulum or ureterocele (4). However, in our case there is no sign or



Figure 1. A stone density has been shown in the left posterolateral wall of the bladder in coronal and axial views of the patient abdominopelvic spiral Computerized tomography scan.

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Figure 2. Patient cystoscopy image shows the left posterolateral wall bulging that had been incised by cutting cauterly then stone revealed and extracted endoscopically.

evidence of urogenital anomaly. Previous appendectomy does not seem to be culprit as the stone was in the left side of the bladder. Two natural vaginal deliveries also could not be the cause. Therefore, the only cause of this stone may be the lodging of a nidus into the wall of the bladder and gradually sub-mucosal growth of the stone. We could not find any similar case in the literature especially in women.

Conclusion

Sub-mucosal bladder stone could be developed in even normal women without any background illnesses.

Authors' contribution

HMR and TZM designed the study, observed accuracy and validity of the study. HMR and AHK collected the data. HMR and TZM supervised the project. HMR, TZM and AHK wrote the paper. All authors edited and revised the final manuscript and accepted its publication.

Conflicts of interest

There are no competing interests to declare.

Ethical considerations

Ethical issues including plagiarism, double publication, and redundancy have been completely observed by the authors. Informed consent was taken from the patient for publication of the report.

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