



# Giant Bladder Stone in a Young Woman

## Genç Kadında Dev Mesane Taşı

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### ABSTRACT

Bladder stones heavier than 100 g are defined as giant bladder stones. Bladder stones occur rarely in women compared to men. Bladder stones in women generally occur secondary to passage of suture material through the bladder following pelvic or gynecologic surgery. The disease is frequently manifested clinically with hematuria, recurrent urinary tract infection or urine retention. In this article, a 31-year-old woman who presented with non-specific urinary tract symptoms and was found to have a giant bladder stone with a weight of 280 g as a result of the studies performed is presented. (*JAREM 2014; 4: 132-4*)

**Key Words:** Young woman, giant bladder stone, sistolithotomy

### ÖZET

Ağırlığı 100 gr.'ın üzerindeki mesane taşları dev mesane taşı olarak tanımlanır. Erkeklerle nazaran kadınlarda mesane taşları nadir olarak görülmektedir. Genellikle kadınlarda mesane taşları pelvik ya da jinekolojik cerrahi sonrası sütür materyalinin mesaneden geçmesine ikincil oluşmaktadır. Hastalar sıklıkla hematüri, tekrarlayan idrar yolu enfeksiyonu veya idrar retansiyonu şeklinde klinik bulgu verir. Bu yazıda, özgün olmayan üriner sistem belirtileri ile başvuran ve yapılan tetkikleri sonucu 280 gr ağırlığındaki dev mesane taşı tespit edilen 31 yaşındaki bir kadın hasta sunulmuştur. (*JAREM 2014; 4: 132-4*)

**Anahtar Sözcükler:** Genç kadın, dev mesane taşı, sistolitotomi

### INTRODUCTION

In current urology practice, bladder stones heavier than 100 g are encountered uncommonly (1). Bladder stones occur very rarely in women. The fact that the urethra is shorter in women compared to men is a factor which facilitates elimination of bladder stones. Bladder stones in women generally occur secondary to passage of suture material through the bladder following pelvic or gynecologic surgery. In addition, neurogenic bladder, chronic bacteriuria due to urease producing bacteria, diverticulitis and inadequate nutrition have been reported as factors leading to bladder stone. Bladder stones may lead to adverse effects including acute urinary retention, bladder tumor due to chronic irritation, bilateral hydronephrosis and related renal failure (2).

### CASE PRESENTATION

A 31-year-old female patient presented to our clinic with complaints of dysuria, pollacuria, urinary incontinence and blood in urine. It was learned that the patient had a history of passing stone at the age of 20 and was treated for the last 3 years because of recurrent urinary tract infection. On physical examination, a solid mass was found in the suprapubic region. Urinalysis revealed hematuria and pyuria. On ultrasonography and computed tomography, an appearance compatible with bladder stone with a size of 8 cm in the long axis which did not caused hydronephrosis was observed (Figure 1).

Ceftriaxon treatment was started and E.coli was isolated in the urinary culture. No growth was found in the urinary culture obtained on the 10<sup>th</sup> day of antibiotic treatment. Urethrocystoscopy

was performed to exclude urthral pathologies. The urethra was observed to be normal and a giant urinary tract stone was observed in the bladder (Figure 2)

On the same session the bladder was removed by cystolithotomy (Figure 3).

The drain was removed on the first day and the patient was discharged on the 2<sup>nd</sup> day after surgery. The stone was found to have a size of 8.3x5.0x7.5 cm and a weight of 280 g (Figure 4).

Analysis of the stone revealed that it contained calcium phosphate and magnesium phosphate. On the follow-up visits at the 1, 2, 3 and 6<sup>th</sup> months, clinical and biochemical tests were found to be normal.

### DISCUSSION

Bladder stones heavier than 100 g are defined as giant bladder stones (1). Bladder stones constitute only 5% of the stones observed in the whole urinary tract (3). The frequency of stones in the urinary tract in women is very low. 95% of all bladder stones are observed in men (4). Suspicion is an important requisite in the diagnosis of bladder stones in women. Symptoms caused by bladder stones are nonspecific. History of pollacuria, dysuria, obstruction in the urinary flow, microscopic hematuria and suprapubic pain is helpful but not pathognomonic for the disease. A giant bladder stone can be palpated on rectal, vaginal or abdominal examination, but physical examination alone is not enough for the diagnosis of bladder stone (1, 5). Abdominal x-ray and ultrasonography may be helpful in the diagnosis, but the definite diagnosis is made by cystoscopy (5). Although bladder



Figure 1. Computed Tomography



Figure 2. Appearance of cystoscopy



Figure 3. Appearance of cystolithotomy



Figure 4. Bladder stone

stones generally suggest urinary tract obstruction, they may occur secondary to stones in the kidney or urether (6). Infravesical obstruction in women is an uncommon condition. It has rarely been reported to have occurred secondary to trauma, catheterization, neurogenic bladder and foreign body. Bladder stones have been reported to occur around sutures, catheters or other objects found in the bladder (4). Most bladder stones contain triphosphate, calcium carbonate and calcium oxalate in their composition (7). The most common surgical procedure for treatment of giant stones is open surgery (8). In patients with small bladder stones and urethral pathologies, both the urethral pathology and the bladder stone are treated endoscopically.

## CONCLUSION

Bladder stone is a rare condition in our urology practice. Physicians should keep in mind the possibility of bladder stone in patients with recurrent urinary tract infection though it occurs rarely and refer to imaging studies. Patients with a previous diagnosis of upper urinary tract stone and a history of stone should be followed up regularly.

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## REFERENCES

1. Becher RM, Tolia BM, Newman HR. Giant vesical calculus. JAMA 1978; 239: 2272-3. [\[CrossRef\]](#)
2. Çiftçi H, Savaş M: Dev mesane taşına bağlı tek taraflı hidronefroz. Türk Üroloji Dergisi 2008, 34: 261-3.
3. Beisland C, Andersen M. Giant urinary bladder stone [in Norwegian]. Tidsskr Nor Laegeforen 2000; 120: 573-4.
4. Pomerantz PA. Giant vesical calculus formed around arterial graft incorporated into bladder. Urology 1989; 33: 57-8. [\[CrossRef\]](#)
5. Schwartz BF, Stoller MZ. The vesical calculus. Urol Clin North Am 2000; 27: 333-46. [\[CrossRef\]](#)
6. Mckay HW, Baird HH, Lynch K. Analysis of 200 cases of urinary calculi with particular reference to methods of management of ureteral stones. Journal of the Americal Medical Association 1948; 137: 225-30. [\[CrossRef\]](#)
7. Becher RM, Tolia BM, Newman HR. Giant vesical calculus. JAMA 1976; 239: 2272-3. [\[CrossRef\]](#)
8. Maneshwari PN, Oswal AT, Bansal M. Percutaneous cystolithotomy for vesical calculi : a better approach. Tech-Urol 1999; 5: 40-2.