

# Anatomik Bozukluğu Bulunmayan Hastalarda Posterior Üretra Taşları

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## ÖZET

### *Anatomik bozukluğu bulunmayan hastalarda posterior üretra taşları*

Üretra taşları üroloji pratiğinde nadir görülen problemlerdendir. Literatürde bu taşların insidensi %0.3'den daha az olarak bildirilmiştir. Üretra taşlarının büyük bir çoğunluğu üst üriner sistem ya da mesanedeki taşların üretraya doğru migrasyonu sonrasında görülür. Primer üretra taşları genellikle postoperatif değişiklikler ya da striktür, üretral divertikül gibi anatomik bozukluklara bağlı olarak oluşur. Bu makalede 5 yıllık süre içerisinde kliniğimize başvuran, üretral anatomik bozukluğu olmayan, posterior üretra taşı bulunan 3 hasta tartışılmıştır.

**Anahtar kelimeler:** Üretra, taş, anatomik anomali

## ABSTRACT

### *Posterior urethral calculi in patients without anatomical abnormalities: Case report*

Urethral calculi are uncommon problem in urological practice. The incidence of these stones is reported to be lower than 0.3% in the literature. The majority of urethral calculi originates from upper urinary tract or bladder and migrates into the urethra. Native forms are generally associated with postsurgical changes or anatomic abnormalities such as strictures and urethral diverticula. In this paper, we discussed posterior urethral stones in three patients without any urethral anatomic abnormality who were admitted to our clinic over a period of 5 years.

**Key words:** Urethra, calculi, anatomic abnormality

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## INTRODUCTION

Urethral calculi are uncommon problem in urological practice. The incidence of these stones is reported to be lower than 0.3% in the literature (1). They are estimated to be in Western world but most of them have been reported to have high incidences in the Middle East and Asia, especially in developing countries (2). The majority of urethral calculi originates from upper urinary tract or bladder and migrate in to the urethra. Native forms are generally associated with postsurgical changes or anatomic abnormalities such as strictures and urethral diverticula (3). The recent studies have shown that posterior urethral calculi are seen not only in childhood but also in the further age, especially after the thirtieth decades. Nutritional habits in childhood and low

urinary peak flow in further decades are claimed for urethral calculi and are thought to be responsible occurring stones in the urethra. Treatment of these stones depends on the stone size, location and mobility of the stones.

In this paper, we discussed posterior urethral stones in three patients without any urethral anatomic abnormality who were admitted to our clinic over a period of 5 years.

## CASE REPORTS

### Case 1

A 31-year-old male with perineal pain and weak stream with dribbling for a long time was found on plain pelvic roentgenogram to have a 10 mm radioopaque stone under the pubic symphysis (Figure 1). Physical examination revealed a hard, fixed 10x7 mm perineal mass. Other urological examinations were normal. Preoperative retrograde urethrogram showed a large filling defect in the posterior urethra. Kidney and bladder

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**Figure 1: A 10 mm radioopaque opacity under the pubic symphysis on plain pelvic roentgenogram.**

ultrasonographies were normal and there was no residual urine. The stone was detected in the posterior urethral channel by transrectal ultrasonography. The patient's urinary peak flow was 5 ml/sec and voiding urinary volume was 455 ml in uroflowmetry.

Confirmation of the diagnosis was made by urethroscopy. The urethra was evaluated as normal until its posterior portion in which there was a 10x7 mm stone. The endoscopic "push-back" technique was practiced for this stone without any damage in urethral or bladder superficial mucosa. After pushing in to the bladder, it was fragmented by pneumatic lithotripter. He was rendered stone free and discharged home with no postoperative complication.

## Case 2

A 33-year-old male with acute urinary retention was presented to our emergency department. We found a 15 mm radioopaque stone under the pubic symphysis on plain abdominal roentgenogram. Physical examination revealed a hard, fixed 15x10 mm perineal mass and suprapubic palpable mass (vesical globe). Other urological examinations were normal. We detected 650 ml urine in the bladder by abdominal ultrasonography. Urethroscopy was normal until the posterior urethra in which a 15x10 mm stone was found. At the outpatient setting the endoscopic "push-back" technique was performed for this stone without any damage in the urethral or bladder superficial mucosa. After the fragmentation of the stone by pneumatic lithotripter, the patient was rendered stone free. No postoperative complication occurred.

## Case 3

A 45-year-old male with acute urinary retention and suprapubic pain was admitted to our clinic. We detected a 10x5 mm radioopaque stone under the pubic symphysis on plain abdominal roentgenogram. We determined suprapubic painfully, palpable mass (vesical globe). Other urological examinations were normal. We ultrasonographically detected 420 ml of urine in the bladder. In his urethroscopic examination, the urethra was normal except a 15x10 mm stone in the posterior portion. The stone was fragmented during endoscopic forceps extraction. This patient was also rendered stone free and discharged home at the same day.

## DISCUSSION

Urinary stone disease can be encountered in almost every part of the urinary tract but urethral settlement is quite rare. Most of the urethral calculi originate from the bladder or upper urinary tracts and become impacted in the posterior urethra (4). The posterior urethra is the commonest location for the urethral stones as all stones of our patients presenting in the posterior urethra (5). There is no data for urethral stones in women.

Although urethral calculi are reported to be relatively more common in childhood, the recent studies have shown that they can be also seen in adults. Verit et al. have reported that people in their second and third decades have a low risk of urethral stones (5). However our patients were in their third and fourth decades.

In previous studies, it has been shown that the patients having posterior urethral stones present with perineal, rectal, urethral or external meatal pain, acute urinary retention, interrupted stream, weak stream with dribbling or palpable urethral mass. Our patients were presented with similar complaints in the literature such as acute urinary retention and weak stream with dribbling (4).

Ultrasonography is a useful non-invasive screening technique, but posterior urethral calculi may be sometimes overlooked in routine abdominal ultrasonography. In our cases, we couldn't suspect from posterior urethral stone by ultrasonography. All of the stones were determined by another imaging technique such as uro-radiography or plain X-ray. In fact all of our stones were radioopaque.

Because any obstruction may cause weak stream and also inflammation, stone formation becomes easily in urinary tract. Indeed, it is well known that most urethral calculi are associated with anatomical pathology of the urethra such as meatal stenosis, urethral strictures, inflammation or diverticulum, though some studies don't affirm to this knowledge. Kamal et al signified that 94% of the patients had no change in the anatomy of the urethra and 98% of the posterior urethral calculi were not associated with such alterations (4). None of the patients had urethral abnormal anatomy.

The management of urethral calculi depends on size, shape, location and mobility of the stones. Treatment options are milking, forceps extraction, basket, endoscopic push-back, electrohydraulic lithotripsy. Holmium laser or

open surgical approach. We treated our patients by endoscopic push-back and pneumatic lithotripsy. Posterior urethral calculi may be an urgent problem that necessitates immediate intervention if the patients have acute urinary retention. Urethral catheterization can damage to the urethral mucosa. Percutaneous cystostomy may be useful in this group of patients.

According to the cases herein, it can be concluded that (a) posterior urethral calculi may be seen in young adult patients without any urethral anatomic abnormalities; (b) urethral stones should be considered in patients presenting urinary symptoms such as weak stream with dribbling or acute urinary retention, and (c) plain abdominal roentgenogram showing infrapubic area may be necessary and satisfactory to determine the urethral stones.

## REFERENCES

1. Aegukkatajit S. Reduction of urinary stone in children from north-eastern Thailand. *J Med Assoc Thai* 1999; 82: 1230-1233.
2. Menon M, Martin IR. Urinary lithiasis: etiology, diagnosis and medical management. In: Walsh PC, Retik AB, Vaughan ED, Wein AJ (Eds), *Campbell's urology*, 8th ed, vol 4. WB Saunders, Philadelphia, 2002; p. 3288-3289.
3. Walker BR, Hamilton BD. Urethral calculi managed with transurethral Holmium laser ablation. *J Pediatr Surg* 2001; 36: E16.
4. Kamal BA, Anikwe RM, Darawani H, Hashish M, Taha SA. Urethral calculi: presentation and management. *BJU Int* 2004; 93: 549-552.
5. Verit A, Savas M, Ciftci H, Unal D, Yeni E, Kaya M. Outcomes of urethral calculi patients in an endemic region and an undiagnosed primary fossa navicularis calculus. *Urol Res* 2006; 34: 37-40.