

Case Report

Enclave Stone in the Prostatic Urethra: A Case Report with Review of the Literature

ABDI EL Moustapha*, AL AFIFI Mahmoud, NEDJIM Abdelkerim Saleh, MOATAZ Amine, DAKIR Mohamed, DEBBAGH Adil, ABOUTAIEB Rachid

IBN ROCHD Hospital Center Casablanca, Morocco.

***Corresponding author:** ABDI EL Moustapha, IBN ROCHD Hospital Center Casablanca, Morocco.

Received: November 27, 2021

Published: December 23, 2021

Abstract

The urethra is an infrequent site. Urethral calculi are stones that have developed in the urethra, as opposed to stones embedded in the urethra of renal or bladder origin. Mr. A.T, 32 years old, with a history of recurrent urinary tract infection. The patient consulted the emergency room for dysuria with penile and perineal pain. Clinical examination revealed a discrete hypogastric swelling, a punctiform urethral meatus and palpation of an intramedullary calculus. A renal-vesicoprostatic ultrasound was performed, showing an intraprostatic calculus. The patient underwent a meatoplasty, the intra-urethral injection of a lubricating gel allowed the extraction of the intramedullary calculus by a fine bengolea forceps, then a small caliber urethral catheter was put in place for 7 days before extracting the prostatic calculus by endoscopic way. Urethral calculi are a rare cause of acute urine retention. Diagnosis based primarily on imaging. The choice of a surgical technique is not always obvious. In daily practice, each case should be discussed, and the most appropriate treatment performed.

Keywords: Stone; Prostate; physiopathology.

Introduction

Lower urinary tract stones are found in the bladder, prostate and urethra. The urethra is an infrequent site, accounting for less than 0.3% of urinary stones [1]. Urethral calculi are stones that have developed in the urethra, as opposed to stones embedded in the urethra of renal or bladder origin. Through this study of an observation and a review of the literature we will discuss the epidemiology, etiopathology and therapeutic aspects.

Observation

Mr A.T, 32 years old, with a history of recurrent urinary tract infection. The patient consulted the emergency for dysuria with penile and perineal pain. The clinical examination found a conscious patient, hemodynamically and respiratory stable, afebrile with a discrete hypogastric tumefaction, a punctiform urethral meatus and the palpation of an intra-meatic calculus. The rectal examination found a painless prostate estimated at 30 g of hard consistency. The kidney, ureter, and bladder (KUP) X-ray did not reveal any renal or bladder stones, but it revealed a stone in the prostatic urethra. A renal-vesicoprostatic ultrasound was performed, showing an intra-prostatic stone (Figure 1). After a penile block, the patient underwent a meatoplasty, the intra urethral injection of a lubricating gel allowed the extraction of the intra meatic calculus (Figure 2) by a fine bengolea forceps, then a small caliber urethral catheter was put in place for 7 days before extracting the prostatic calculus by endoscopic way.



Figure 1: hyperechogenic image with posterior shadow cone at the prostate.



Figure 2: Extraction of the intra-meatic calculus by a bengole forceps.

Discussion

Urethral stones, are rarely encountered in lithiasic disease. They can be endogenous or migrant and often present as urinary retention [2]. Charles DS and al [3], in their study, found that urethral stones were present in 58.6% of men and 41.4% of women. Migrating stones develop in the kidney or bladder and migrate to the urethra. Native urethral stones form in the urethra and are associated with stenosis, urethral diverticles, chronic infections. Endogenous stones are formed by the stasis of prostatic secretions resulting from obstruction (BPH, post-infectious stenosis), inflammation and infections. Inflammation of the prostatic tissue with the refore a breakdown of the balance of calcium/citrate promoting precipitation.

Migrating stones are linked to an upstream obstruction with urethro-prostatic reflux promoting ductal dilation and urinary stasis [4]. Patients may have acute urinary retention, interrupted or weak discharge, hematuria, or pain affecting the penis, urethra, or perineum. In addition, nearly 100% of urethral calculations are radio-opaque and can be viewed using simple radiographs. Retrograde urethrography or cross-sectional imaging can also be used to aid diagnosis [5].

Typical minimally invasive endoscopic treatment, consists of forceps or basket extraction or endoscopic pushing with lithotripsy. In general, open surgery is recommended for large stones, but some exceptions have been described. For example, Demir et al. successfully treated a patient with a stone in the

prostatic urethra measuring 65x70x60 mm by endoscopic procedures such as laser and pneumatic lithotripter.

Conclusion

Urethral calculi is a rare cause of acute urine retention. Diagnosis is easy and based primarily on imaging. Always think of urethral lithiasis in young patients with acute retention of urine or dysuria and look for malformative uropathy especially diverticular urethral. The choice of a surgical technique is not always obvious given the seat and the size of the calculation. In daily practice, each case should be discussed, and the most appropriate treatment performed.

References

1. 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.
2. Kaczmarek K, Gołab A, Soczawa M, et al. Urethral stone of unexpected size: case report and short literature review. *Open Med (Wars)*, 2016; 1: 7-10.
3. Scales CD, Curtis LH, Norris RD, Springhart WP, Sur RL, Schulman KA, et al. Changing gender prevalence of stone disease. *J Urol*, 2007; 177: 979-982.
4. Mezzour MH, Messaoudi YA El. Grosse lithiase intra prostatique (A propos d'un cas). *African Journal of Urology* 2006; 12(2): 111-114.
5. Kamal BA, Anikwe RM, Darawani H, et al. Urethral calculi presentation and management. *BJUI*. 2004; 93: 549-552.