

Üretra darlığı olan büyük mesane taşının tedavisinde perkütan Suprapubik sistolitotripsisi

Percutaneous suprapubic cystolithotripsy for large bladder stone with urethral stricture

Ayhan Karaköse

Muş Devlet Hastanesi Üroloji Kliniği, Muş

Geliş tarihi (Submitted): 21.10.2012
Kabul tarihi (Accepted): 08.01.2013

Yazışma / Correspondence

Op. Dr. Ayhan Karaköse
Üroloji Uzmanı
Tel: 0505 724 09 11
E-mail: drayhankarakose@gmail.com

Özet

Yaygın bir ürolojik hastalık olan mesane taşlarının tedavisinde birçok cerrahi teknik tanımlanmıştır. Bu çalışmada üretra darlığı olan ve perkütan suprapubik sistolitotripsisi ile üretraya zarar vermeden büyük mesane taşı tedavisi sunulmuştur.

Anahtar Kelimeler: Perkütan suprapubik sistolitotripsisi, büyük mesane taşı, üretral darlık.

Abstract

Bladder stone is a common urological disease and numerous surgical techniques have been used for the removal of bladder stones. We report a case of large bladder stone with urethral stricture treated with percutaneous suprapubic cystolithotripsy without damaging urethra.

Key Words: Percutaneous suprapubic cystolithotripsy, large bladder stone, urethral stricture.

Introduction

Bladder stone is a common urological disease and numerous surgical techniques have been used for the removal of bladder stones. Bladder stones traditionally treated with transurethral cystolithotripsy and open cystolithotripsy. However, transurethral cystolithotripsy can damage the urethra. Currently, minimally invasive procedure such as percutaneous suprapubic cystolithotripsy (PCCL), has become the management choice (1,2). We present a case large bladder stone with urethra stricture treated with PCCL.

Case Report

A 63-year-old man presented to our urology department with difficult urination. He gave a history of frequency, dysuria and interrupted stream for the past 1 year. He has been operated one time before due to urethral stricture. The full blood tests were normal and haematuria on urinalysis. Physical examination was also normal. Ultrasound revealed 3 cm stone in the bladder, and residual urine was 150 cc. Surgery was performed under spinal anesthesia in lithotomy position. Before the patient underwent internal urethrotomy. An annular stricture

which was at penile urethra was opened using a cold knife. Cystoscopy was performed then and calcul was identified (Figure 1). PCCL was performed with cystoscopy to see the bladder. About 2 cm proximal to the symphysis pubis



Figure 1: The calcul was identified by cystoscopy.



Figure 2: After following dilatation 30-F Amplatz was inserted into the bladder.



Figure 3: PCCL was performed through a suprapubic sheath and the remaining pieces of stone were taken out of the bladder with grasping forceps.

1 cm incision was made and the bladder was punctured with an 18-gauge needle under direct vision. A floppy-tip guidewire was passed into the bladder, and then the needle removed. Tract was dilated using the Amplatz renal dilator up to 30 FR under direct vision with cystoscopy. The working sheath was placed into the bladder, and safety guidewire was left (Figure 2). After that entered into the bladder with the nephroscope and calculi was identified. The stone was divided into fragments with a pneumatic lithotripter. The remaining pieces of stone were taken out of the bladder with grasping forceps (Figure 3). The patient was cleared of stone endoscopically and the working sheath was removed. 18 F suprapubic catheter was placed over the guidewire into the bladder and 18 F

foley catheter was also placed transurethraly. The suprapubic catheter was removed on postoperative first day and foley catheter was removed on postoperative second day and the patient was discharged from hospital.

Discussion

Various ways were defined to treatment of bladder stones such as open surgery, transurethral cystolithotripsy (TUCL), shock wave lithotripsy (SWL), PCCL (3,4). open surgery has been used to treatment bladder stones for many years with a high success rate. But open surgery has inherent problems such as long scar, a long-term catheterization, a long hospital stay and increased risk of infection (5,6).

Transurethral cystolithotripsy is most widely used to treatment of bladder stones less than 2 cm. But transurethral cystolithotripsy has potential risk of urethral injury and post operative urethral stricture because of the stone fragments difficult to removed from urethra. Operation time was also prolonged in large bladder calculi and it may occur bladder wall injury or even perforation of bladder wall by stone crush forceps or lithotripter (7,8).

Shockwave lithotripsy is also used in the treatment of bladder stones. Fragmentation and cleaning of stone fragments are obtained with one treatment in 62% to 93% of patients but bladder outlet obstruction may adversely affect the spontaneous passage of stone fragments (6,9-11).

Gopalakrishnan and colleagues reported for the first time in the treatment of bladder stones with PCCL (12). PCCL morbidity is significantly less than open surgery (13). Percutaneous suprapubic approach in the treatment of bladder stones is a safe and effective method of treatment without damaging urethra. This technique is also useful in cases does not allow the transurethral approach and children. Furthermore PCCL is shorter hospital stay than other methods (5,14).

In our study we present a case large bladder stone with urethra stricture treated with PCCL. Consequently PCCL is superior success rate, shorter operative time, shorter hospital stay safe and effective method of treatment bladder stone without damaging urethra. Furthermore PCCL is useful for not allow the transurethral approach and children. In our opinion PCCL is the best way to treatment bladder stone with urethral stricture.

References

1. Schwartz BF, Stoller ML. The vesical calculus. *Urol Clin North Am* 2000;27:333–346.
2. Aron M, Agarwal MS, Goel A. Comparison of percutaneous with transurethral cystolithotripsy in patient with large prostates and large vesical calculi undergoing simultaneous transurethral prostatectomy. *BJU Int* 2003;91:293–295.
3. Razvi HA, Song TY, Denstedt JD. Management of vesical calculi: Comparison of lithotomy devices. *J Endourol* 1996;10:559–563.
4. Teichman JM, Rogenes VJ, McIver BJ, Harris JM. Holmium:yttrium-aluminum-garnet laser cystolithotripsy of large bladder calculi. *Urology* 1997;50:44–48.
5. Maheshwari PN, Oswal AT, Bansal M. Percutaneous cystolithotomy for vesical calculi: a better approach. *Tech Urol* 1999; 5:40-2.
6. Bhatia V, Biyani CS. Vesical lithiasis: Open surgery versus cystolithotripsy versus extracorporeal shock wave lithotripsy. *J Urol* 1994;151:660–662.
7. History of surgical instruments. *Zentralblatt für Chirurgie*.1999;124(11):1059-66.
8. Bapat SS. Endoscopic removal of bladder stone in adults. *Br J Urol* 1977;49:527-30.
9. Bosco PJ, Nieh PT. Extracorporeal shock wave lithotripsy in combination with transurethral surgery for management of large bladder calculi and moderate outlet obstruction. *J Urol* 1991;145:34-36.
10. Hotiana MZ, Khan LA, Talati J. Extracorporeal shock wave lithotripsy for bladder stones. *Br J Urol* 1993;71:692-694.
11. Frabboni R, Santi V, Ronchi M, et al: Echo-guided SWL of vesical stones with Dornier MPL 9000 lithotripter in obstructed and unobstructed patients. *J Endourol* 1998;12:81-86.
12. Gopalakrishnan G, Bhaskar P, Jehangir E. Suprapubic lithotripsy. *Br J Urol*. 1988;62:389.
13. Salah MA, Holman E, Toth C. Percutaneous suprapubic cystolithotripsy for pediatric bladder stones in a developing country. *Eur Urol*. 2001;39:466-70.
14. Batislam E, Germiyanoglu C, Karabulut A, et al. A new application of laparoscopic instrument in percutaneous bladder stone removal. *J Laparoendosc Adv Surg Techn A* 1997;7:241-4.