ORIGINAL RESEARCH PAPER

General Surgery

DISTAL URETHERAL CALCULUS- A CASE REPORT

KEY WORDS: uretheral stone, meatotomy, stone analysis, USG KUB.

Dr. Sunil Kumar Negi* General Surgeon RH Reckong Peo, KINNAUR, H.P. *Corresponding Author

Dr. Raj Kumar Negi General Surgeon RH Reckong Peo, KINNAUR, H.P.

Dr. Cliffin Mathai Katoor Junior Resident, Deptt. of General Surgery , IGMC SHIMLA , H.P.

ABSTRACT

Uretheral stone are rare forms of urinary stone disease. Uretheral stones constitute about 1-2% of urinary stones in developing countries. Majority of the uretheral calculi are migratory from upper urinary tract. There are few case reports documenting distal uretheral stone removal in emergency settings. Here we report a case of distal uretheral stone removed in emergency department.

INTRODUCTION

Uretheral stones constitute about 1-2% of urinary stones in developing countries Lower urinary tract stones are found in bladder , prostate and urethera. Incidence of uretheral stone is around 0.3 %.[1] Uretheral stone are more common in male than female due to longer urethera in male .[2] Based on their origin, uretheral calculi are divided into two types- primary and secondary. Primary uretheral calculi occur due to underlying urethral diease like stricture or diverticulum. They are usually small and multiple and composed of uric acid or struvite . Secondary urethral calculi form as a result of antegrade migration from either the kidneys, ureters or urinary bladder .[2] They are usually large and mainly composed of calcium oxalate or citrate. The clinical presentation of urethral calculi is variable, usually depends on size and anatomic location of the stone.Various clinical symptoms are dribbling, dysuria , hematuria ,increased frequency, acute urinary retention, suprapubic pain .[3] Other rare complications are penile gangrene, iliac vein compression syndrome and urethrocutaneous fistula [4-6]. Management of urethral stone disease varies according to stone size, location and associated urethral pathology.[7] Different treatment options available are – meatotomy, retrograde manipulation into urinary bladder followed by litholapaxy or lithotrypsy and open surgery.

CASE REPORT

A 23 years old male presented in emergency settings with dribbling of urine and dysuria for last 6-8 hours. He had history of one episode of vomiting. On general physical examination, vitals were normal. There was stone of size 2*1.5 cm palpable in penile urethera near meatus .[**Figure-1**]

Figure-1. Distal Uretheral Stone.

Lab. investigation were within normal limit. USG KUB shows single calculus of size 11.8 mm at lower pole in left kidney with bilateral mild hydrouretronephrosis.[**Figure-2**]

Figure- 2.usg Kub Shows Left Renal Calculus With Hdn.

Single stone was removed from distal urethera under local anaesthesia (2% lignocaine jelly) by performing small meatotomy.The stone was measured 1.5*1 cm and weighted 0.830 grams. [**Figure-3**]

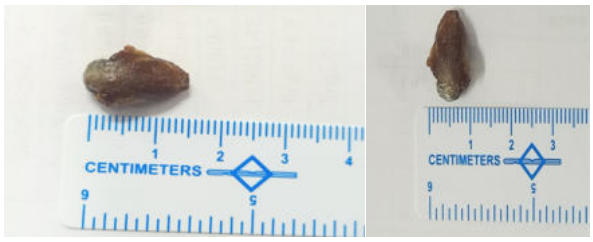

Figure-3. Single Stone Of Size 1.5* 1 Cm.

Stone was sent for chemical analysis and composition. Report shows stone composed of 90 % calcium oxalate monohydrate and 10 % calcium oxalate dihydrate.[**Figure-4**]

Figure-4. Stone Analysis.

DISCUSSION

Urethral stones are rare forms of urolithiasis accounting for less than 1% of urinary calculi.[8] Urethral calculus is more commonly found in men than women and children. [9] Various predisposing factors for stone formation are urethral diverticulum, urethral stricture, hypospadias, and meatal stenosis [10]. Urethral calculi are predominantly found in the prostatic urethra, the bulb, the proximal penile urethra and external meatus.[11] Approximately 88% of urethral stones are found in posterior urethra.[12] The clinical presentation of urethral stone is variable. Specific signs and symptoms usually depends on the anatomic location of the stone. Anterior urethral stones causes dysuria and may be confirmed by palpation. Posterior urethral calculi may produces referred pain to the rectum or perineum.[13] Management of urethral stone varies according to the location, size and associated urethral diseases. Retrograde manipulation in urinary bladder followed by litholopaxy or lithotripsy is suitable procedure for small posterior urethral calculi.[14] A small anterior urethral calculus can be removed by applying 2% lignocaine jelly and meatotomy as in our case . Large urethral calculi should be removed by open surgery. Stones removal and urethroplasty are preferred in meatal stone associated with stricture urethera .

CONCLUSION

The urethral stone remains a rare cause of urinary stone disease. Thorough clinical and radiological examination of urinary tract or underlying urethral pathology should be done . The minimally invasive procedure is to be preferred whenever possible and open surgery reserved for management of large impacted stones and underlying uretheral pathology .

ACKNOWLEDGMENT: none

CONFLICT IF INTEREST: none

FUNDING DETAILS : none

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. Agarwal A, Sigdel G, Belokar WK. A rare case of giant urethral calculus and multiple urethral diverticulum JCMS-Nepal 2012;8(2):46-48.
3. Kamal, B.A., Anikwe, R.M., Darawani, H., Hashish, M. and Taha, S.A. (2004) Urethral Calculi: Presentation and Management. BJU International , 93, 549-552.
4. Ramdass MJ, Singh VN. Multiple Urethral stones causing Penile gangrene. Case Rep Urol 2014; 1-3.
5. Akiko Ikegami et al. Iliac vein Compression Syndrome due to Bladder Distension caused by Urethral Calculi. Hindawi Publishing Corporation Case Reports in Urology Volume 22015 Article ID. 743270 3 pages. http//dx. doi. org/10.1155/2015/743270.
6. Prakash J, Sharma P, Sankhwar S, Goel A. Large anterior urethral calculus presented as scrotal mass with urethrocutaneous fistula. BMJ Case Reports 2013. Doi10.1136/bcr-2013-200805.
7. Prabhuswanny V K, Tiwari R and Krishnamoorthy R. A Giant Dumbell Shaped Vesico-Prostatic Calculus: A case Report and Review of Literature. Case Reports in Urology, Volume 2013, Article ID 167635, 5 pages, http://doi/10.1155/2013/167635
8. Shigehiko Koga, Yoshitaka Arakaki, Masanori Matsuoka, Ohyama C. Urethral calculi. Br J Urol. 1990; 65(3):288-289.
9. Manas RP, Priyadarshi Ranjan, Rakesh Kapoor. Female urethral diverticulum presenting with acute urinary retention: Reporting the largest diverticulum with review of literature. Indian J Urol. 2012; 28(2): 216-218. 10. Stephen CP, Ansar UK, Malek RS, Laurence FG. Urethral calculi. J Urol. 1976; 116(4):436-439
11. Kotkar K, Thakkar R, Songra MC. Gaint urethral calculus. JSCR 2011;8(9):1-3.
12. Kamal B.A., Anikwe R.M., Darawani H., Hashish M., Taha S.A., Urethral calculi: presentation and management, BJU Int., 2004, 93, 549-552
13. Win T. Giant urethral calculus: Singapore Med J 1999; 35:414-5.
14. El-Sherif AE, Prasad K. Treatment of urethral stones by retrograde manipulation and extracorporeal shock wave lithotripsy. Br J Urol. 1995; 146(6):1546-1547.