



Acquired Urethral Diverticulum Following Hypospadias Repair: A Case Report

Hipospadias Cerrahisinden Sonra Görülen Üretral Divertikül; Olgu Sunumu

Üretral Divertikül / Urethral Diverticulum

Onur Dede¹, Mansur Dağgüllü¹, Mazhar Utangaç¹, Necmettin Penbegül¹, Gülay Dede²

¹Department of Urology, Faculty of Medicine, Dicle University,

²Department of Clinical Microbiology and Infectious Diseases, Gazi Yasargil Training and Research Hospital, Diyarbakır, Turkey

Özet

Üretral divertikül erkeklerde nadir görülen bir durumdur. Hastalar idrar yapma ile ilgili semptomlar ve üretra ile ilişkili kitle ile başvuruda bulunurlar. Bu çalışmada fizik muayene, ultrason ve MR'da divertikül saptanamadı, üretrografi yapıldı üretral divertikül ve içerisinde 2,5 cm taş tesbit edildi. Hastaya divertikül eksizyonu ve üretroplasti yapıldı.

Anahtar Kelimeler

Üretral Divertikül; Erkek Hasta; Hipospadias Cerrahisi

Abstract

Urethral diverticulum is a rare condition in men. Patients often presented with voiding symptoms and mass with related urethra. In this study, diverticula did not detected after result of ultrasound, MRI and physical examination, Retrograde urethrography was performed and diverticulum and 2.5 cm stone was detected in diverticula. The exsion of urethral diverticula and urethroplasty were performed.

Keywords

Urethral Diverticulum; Male Patient; Hypospadias Repair

DOI: 10.4328/JCAM.3487

Received: 04.04.2015 Accepted: 14.04.2015 Printed: 01.08.2014 J Clin Anal Med 2014;5(suppl 4): 548-9

Corresponding Author: Onur Dede, Department of Urology, Faculty of Medicine, Dicle University, Diyarbakır, Turkey.

GSM: +905057019530 F.: +90 4122488001 E-Mail:dronurdede@hotmail.com

Introduction

Male urethral diverticulum is rare, and always located in the penile urethra. It is classified as either congenital or acquired [1], and may be defined as pouch-like enlargements that are continuous with the urethral lumen. In males, acquired diverticula may be found anywhere along the urethra, and the peno-scrotal junction is the most common site for anterior urethral diverticulum. Urethral diverticulum can occur in patients who have undergone hypospadias surgery, particularly those who had an onlay island flap repair, and bladder catheterization [2,3]. The consequences of hypospadias repair continue throughout life, and surgical techniques are always evolving, making it easy to ignore past failures.

Case Report

A 28 year old male presented with a 3 cm mass in the scrotum on the border of the left testis. He complained of urinary symptoms. He had had hypospadias repair 20 years ago with onlay island flap from scrotum skin. The patient had initially noticed the mass 7 years previously, and it had continued to grow since then. On physical examination, there was a scrotal mass as a primary intrascrotal lesion. Scrotal ultrasonography showed a wall-calcified mass at the border of the scrotum and left testis, but did not make a distinction between a benign and a malignant mass. Magnetic resonance (MR) imaging was used for evaluation of scrotal abnormalities and showed a mass with calcified wall. There was no information regarding the relationship between mass and urethra.

Retrograde urethrography was performed and diverticulum was detected. The patient underwent a diverticulectomy and a primary urethroplasty (Figure 1a, 1b, 1c). The diverticulum was



Figure 1. The urethral diverticula and stone (A,B,C)

dissected, involving its entire neck, until the urethra was completely exposed. A urethral defect was closed using 4-0 loose polydioxanone, and the penile dartos was interposed to avoid fistulas.

Discussion

Urethral diverticula are either congenital or acquired, and are rarely observed in men. The suspected mechanisms that exist for acquired diverticula in males are related to obstruction and increased urethral pressure [4]. Diverticula are divided into two types; saccular and tubular. The connection between the urethral diverticula and the true urethral lumen may form a narrow or a wide neck. Urethral diverticula are associated with urinary obstruction, urinary stasis, and calculosis [5]. The most common etiologies of male acquired diverticula include urethral trauma, stricture, abscess, or post-hypospadias repair [1,6]. Indeed, the urethral diverticulum rate is 0.5% after hypospadias surgery [7]. In the present study, the patient had undergone hypospadias repair 20 years previously, and although he had a urethral diverticulum, he did not complain of any voiding symptoms, and there was no link between mass and urethra during palpation. The patient's MR showed a mass in the scrotum with calcified wall.

The recommended treatment is surgical excision of the diverticulum and urethroplasty over a transurethral catheter. If the urethral defect is very large, then extragenital free grafts can be used. In some cases, an endoscopic approach has been applied to small diverticula. There is no perioperative morbidity after surgical treatment, and short-term follow-up can be marked by the recurrence of diverticulum, fistula formation, and urethral stenosis [8]. With regard to the present case, a diverticulectomy and a primary urethroplasty were performed.

Conclusion: While it is rare to find acquired urethral diverticula in males, a high index of suspicion is required for correct diagnosis and treatment. A urethral diverticulum may clinically mimic primary intrascrotal mass lesions, and retrograde urethrography is required as a gold standard method in diagnosis. Open diverticulectomy and urethroplasty is the recommended approach for large diverticula.

Competing interests

The authors declare that they have no competing interests.

References

1. Parker WR, Wheat J, Montgomery JS, Latini JM. Urethral diverticulum after endoscopic urethrotomy: case report. *Urology* 2007;70(5):1005-7.
2. Baskin LS, Duckett JW, Ueoka K, Seibold J, Snyder HM. Changing concepts of hypospadias curvature lead to more onlay island flap procedures. *J Urol* 1994;151(1):191-6.
3. Laudone VP, Green KF, Wyker AW. Giant posterior urethral diverticulum after radical retropubic prostatectomy. *J Urol* 1988;139(2):364-6.
4. Allen D, Mishra V, Pepper W, Shah S, Motiwala H. A single-center experience of symptomatic male urethral diverticula. *Urology* 2007;70(4):650-3.
5. Kajiwara M, Inoue K, Kato M, Usui A, Matsubara A, Usui T. Anterior urethral valves in children: a possible association between anterior urethral valves and Cowper's duct cyst. *Int J Urol* 2007;14(2):156-60.
6. Venkatanarasimha N, Freeman SJ, Dubbins PA. Posterior urethral diverticulum on transrectal sonography. *J Ultrasound Med* 2009;28(6):827-9.
7. Mouriquand PD, Persad R, Sharma S. Hypospadias repair: current principles and procedures. *Br J Urol* 1995;76(3):9-22.
8. Radojicic ZI, Perovic SV, Djordjevic ML, Vukadinovic VM, Djakovic N. 'Pseudo-spongionoplasty' in the repair of a urethral diverticulum. *BJU Int* 2004;94(1):126-30.

How to cite this article:

Dede O, Dağgüllü M, Utangaç M, Penbegül N, Dede G. Acquired Urethral Diverticulum Following Hypospadias Repair: A Case Report. *J Clin Anal Med* 2014;5(suppl 4): 548-9.