CASE REPORT / OLGU SUNUMU

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Unusual Presentation of Type 3 Posterior Urethral Valve: A Case Report

Tip 3 PUV'nin Alışılmadık Bir Prezentasyonu: Bir Olgu Raporu

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Abstract

Type 3 posterior urethral valves (PUV) are rare in pediatric urology departments and appear as a diaphragm with a central pinpoint opening in the urethra. A 14-year-old male patient presented with post-void hematuria and dribbling during micturition. Ultrasonography revealed no hydroureteronephrosis; however, the bladder wall appeared thickened and trabeculated. In the posterior urethra, an annular ring with a central opening permitting only guidewire passage was observed, characteristic of type 3 PUV. Ablation of the lesion was performed using a holmium: yttrium-aluminum-garnet laser. 14-french urinary catheter was placed, and the patient was discharged the next day without complaint. Even when there is urinary impairment, individuals may dismiss it as normal. This problem should be properly examined and investigated, particularly from the perspective of PUV type 3.

Keywords: Posterior urethral valve, haematuria, cystoscopy, dysuria

Öz

Tip 3 posterior üretral valv (PUV) çocuklarda kısmen nadir durumdur ve merkezinde iğne ucu kadar açıklığa sahip diyafram benzeri yapının gözlenmesi ile tanınır. On dört yaşında erkek hasta, hematüri ve idrarını kesik kesik akması şikayetiyle başvurdu. Ultrasonografi sonucunda hidroüreteronefroz saptanmadı, ancak mesane duvarının kalın ve trabeküle olduğu gözlendi. Daha sonra üretrosistoskopi planlandı, posterior üretrada halka şeklindeki diyafram benzeri lezyon intraoperatif tanındı. Tip 3 PUV'ye özgü olarak üretra noktasal bir açıklığa sahipti. Yalnızca kılavuz tel geçişine izin vermekteydi. Lezyonun ablasyonu için holmium: yttrium-aluminum-garnet lazer kullanıldı. Diyafram şekilli valv giderildi. Ardından, üretrosistoskopide her iki üreterin lateral pozisyonlandığı belirlendi. Hastaya üriner kateter yerleştirildi ve ertesi gün şikayetleri olmadan taburcu edildi. Bir hafta sonra kontrole çağırılan hastanın üriner kateterin çıkarılması ile eski şikayetlerinin gerilediği gözlendi. İdrar problemleri, bireyler tarafından özellikle adölesan çağlarda her zaman erken dönemde dile getirilmeyebilir. Üriner şikayetler detaylı irdelenmeli ve değerlendirilmelidir.

Anahtar Kelimeler: Posterior üretral valv, hematüri, sistoskopi, dizüri

Introduction

Posterior urethral valves (PUV) are one of the most common causes of lower urinary obstruction in the pediatric population. Young's classification divides this condition into three groups and type 3 valves are the rarest group among them. We aimed to discuss an unusual and late-onset PUV type 3 case in an adolescent patient.

Case Report

A 14-year-old male patient presented with post-void haematuria and indicated that his micturition always flows in a dripping pattern, and he thought that was normal. A blood test and urinalysis were performed. The patient's laboratory tests were unremarkable, with normal creatinine levels; however, 14 red blood cells were identified in the urinalysis. Ultrasonography

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was performed, and it was stated that the sizes of both kidneys were normal and there was no hydroureteronephrosis, but the bladder wall was thick and trabeculated. It was decided to perform cystourethroscopy without prior retrograde urethrography or voiding cystourethrography. A lesion compatible with PUV type 3 was seen in the posterior urethra (Figure 1), an annular ring with a hole in the centre that allows only guide passage. There was no history of prior surgical intervention or traumatic events to account for this condition. The lesion was ablated with a holmium: yttrium-aluminum-garnet (YAG) laser (Figure 2).

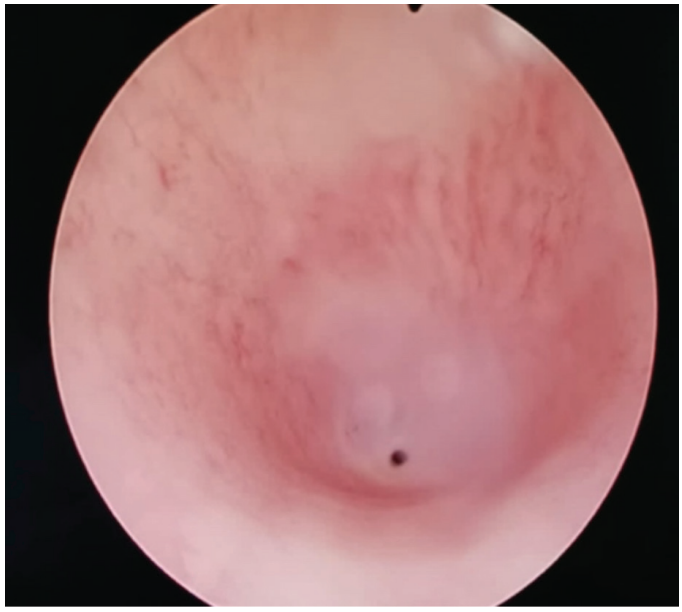

Figure 1: Figure showing the valve encountered in the posterior urethra during cystoscopy

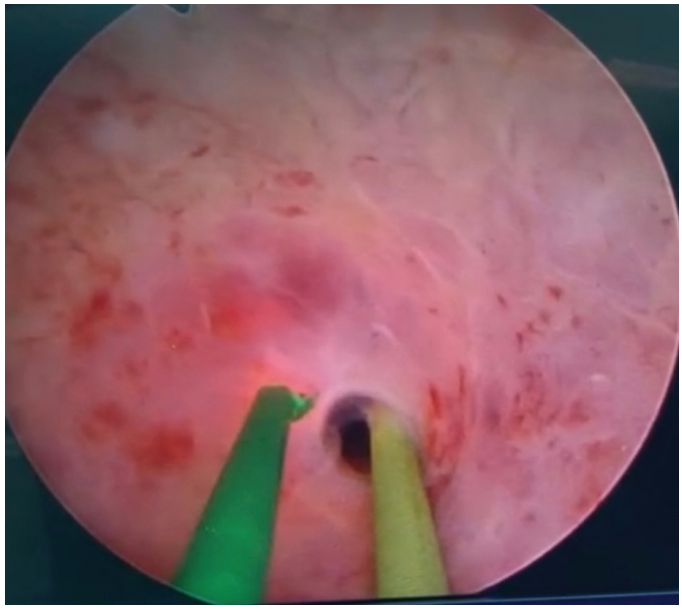

Figure 2: This figure shows the valve through which a catheter is sent and holmium-YAG laser is about to be applied
YAG: Yttrium-aluminum-garnet

Subsequently, the bladder was visualised, and it was determined that both ureters were positioned laterally according to physiological position. However, there were no signs of vesicoureteral reflux (VUR). After the procedure, a 14-french urinary catheter was inserted, and the patient was discharged one day later without any complaints. The patient was called to remove the urinary catheter three weeks later, and when he was checked in, it was observed that his micturition complaints were resolved. The patient is still being followed up, and there have been no complaints after the procedure at this point. The patient is planned to have a follow-up cystourethroscopy.

Discussion

Type 1 valves are the most common and extend distally from the verumontanum. Because type 2 valves extend proximally from the verumontanum to the bladder neck, they usually do not cause lower urinary obstruction. Type 3 valves, on the other hand, are less common and resemble diaphragms with a central pinpoint opening into the urethra. Type 3 valves have been proposed to be the urogenital membrane's embryonic persistence (1).

Uroflowmetry was not performed for our patient, this is planned for follow-up period. The diagnosis of PUV is now largely established prenatally by findings like oligohydramnios or hydroureteronephrosis as a result of recent technological and medical breakthroughs in the past few decades (2,3). Even in early ablated PUV situations in the newborn period, a variety of symptoms can occur in the subsequent stages of life, including VUR, hydroureteronephrosis, voiding dysfunction, sexual dysfunction, and valve-bladder syndrome (1-4). For a case presenting with such late-onset symptoms, we utilized a holmium-YAG laser. And after performing cystourethroscopy, we placed a catheter and discharged the patient with the catheter in place for three weeks. The reason for the three-week interval was our belief that it would heal with recurrent stricture. Additionally, since we did not suspect VUR, voiding cystourethrography was not performed. PUV should be considered in patients with voiding problems in adolescents. Examination should be carried out that purposive. It is important to remember that although PUV cases are commonly detected before birth, but might occur late and atypically. Dripping voiding and haematuria, especially in PUV type 3 cases, might be the initial presenting symptom. Even though there might be dysfunctional voiding, sometimes patients call it as normal. This situation should be carefully examined and investigated.

Ethics

Informed Consent: Informed consent was obtained from the patient and both parents before the preparation of this case report. Utmost effort was made to protect the data.

Footnotes

Authorship Contributions

Surgical and Medical Practices: E.A., G.K., Concept: G.B.B., O.M.Ç., Design: G.G.B., İ.S., Data Collection and/ or Processing: E.A., İ.Y., Ö.E., O.M.Ç., Analysis and/or Interpretation: G.K., Literature Search: G.B.B., E.M., S.D., Writing: E.A.

Conflict of Interest: All authors have disclosed no conflicts of interest.

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