

Ectopic Ureterocele: An Infrequent Cause of Retrograde Ejaculation and Its Diagnosis: Case Report

Ektopik Üreterosele: Retrograd Ejakülasyonun Nadir Bir Nedeni ve Tanısı

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Geliş Tarihi/Received: 12.11.2009
Kabul Tarihi/Accepted: 15.08.2010

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ABSTRACT Retrograde ejaculation is an uncommon cause of infertility. It may be congenital, acquired or idiopathic. It can be very rarely a consequence of an ectopic ureterocele. Herein, we present an infertile patient with retrograde ejaculation due to ectopic ureterocele and emphasize the role of magnetic resonance imaging in diagnosis. Only three similar cases have been reported in the literature. The pathogenesis of retrograde ejaculation due to ureterocele remains unclear. It is postulated that dilated ectopic ureter in some way affected the development of the innervation of the bladder neck. Ectopic ureterocele should be kept in mind in the differential diagnosis of patients with retrograde ejaculation.

Key Words: Ureterocele; ejaculation; infertility

ÖZET Retrograd ejakülasyon infertilitenin nadir bir nedenidir. Etyolojisi doğumsal, kazanılmış ve idiopatik orijinli olabilir. Çok nadiren ektopik bir üreterosele sonucu olabilir. Burada, ektopik üreterosele bağlı retrograd ejakülasyonu olan infertil bir hastayı sunuyoruz ve tanıda manyetik rezonans görüntülemenin rolünü vurguluyoruz. Literatürde sadece üç tane benzer vaka bildirilmiştir. Üreterosele bağlı retrograd ejakülasyonun patogenezi açık değildir. Dilate ektopik üreterin bir şekilde mesane boynunun innervasyonunun gelişimini etkilediği varsayılmaktadır. Retrograd ejakülasyonu olan hastaların ayırıcı tanısında ektopik üreterosele akıldan tutulmalıdır.

Anahtar Kelimeler: Üreterosele; ejakülasyon; kısırlık

Türkiye Klinikleri J Med Sci 2011;31(6):1585-7

Retrograde ejaculation is an uncommon cause of infertility. It may be congenital, acquired or idiopathic. It may also be present in cases with meatal stenosis and posterior urethral valves or bladder neck incompetence due to extrophy. It may also occur in patients with spina bifida. Different congenital abnormalities can occasionally cause retrograde ejaculation, e.g. ejaculatory ducts entering into the bladder and very rarely ectopic ureters or ectopic ureteroceles terminating in the prostatic urethra.¹ There are only three cases reported in the literature.² In our case, there was no history of previous surgery and the only complaint of our patient was infertility.

CASE REPORT

A 32-year-old man was referred to our institution with the complaint of infertility. His medical history revealed primary hypospermia that had persisted since his adolescence. Previous consecutive sperm analyses revealed azoospermia. Physical and rectal examinations revealed normal findings. Scrotal examination including vas deferences was normal. Both testes were normal in size and consistency. Plasma gonadotropin and testosterone levels were normal. The diagnosis of retrograde ejaculation was made with the findings of numerous sperms in post-ejaculatory urine analysis. There was no well-defined cause of retrograde ejaculation including surgery, drug use, neurologic causes in his past medical history. Transrectal ultrasound (TRUS), transabdominal ultrasound, magnetic resonance imaging (MRI) and magnetic resonance (MR) urography examinations were performed. Prostate, seminal vesicles and ejaculatory ducts were normal and no cyst was identified in TRUS. A dilated ductal lesion at the left ureteral trace (seen in TRUS) and a duplicated renal collecting system with ureterocele were detected on transabdominal ultrasound. MRI and MR urography showed complete ureteral duplication associated with ectopic ureterocele extending to posterior urethra and causing dilation at the bladder neck (Figure 1). In addition, MR urography showed a ureterocele at the end of the ureter which was draining the upper pole. Posterior urethra, verumon-



FIGURE 1: MRI T2 weighted images: Intravesical ureterocele (**short arrow**) extends through the bladder neck and prostatic urethra (**long arrow**), its widest diameter is 6 cm.

tanum and ejaculatory canal orifices were normal in cystourethroscopy, however at the left side ureterocele was identified lying upon the bladder neck, as reported on the MRI. In addition, ureteral orifice was found stenotic and located superiorly and anteromedially to the ureterocele. Decompression of the ureterocele was performed with a “reverse T incision”. Patient was found to have severe oligospermia on follow up visits and assisted reproductive treatment was used.

DISCUSSION

Retrograde ejaculation associated with a ureterocele is extremely rare. The mechanism of retrograde ejaculation caused by ectopic ureter or ureterocele is unclear. Three similar cases that have been reported previously in the literature share certain characteristics.²⁻⁴ One of them was a 22-year-old man with retrograde ejaculation despite having a nephro-uretero-ureteroclectomy at the age of 9.² All cases had an ectopic ureter or ectopic ureterocele which inserted into the prostatic urethra or prostatic fossa. The authors did not find any anatomic changes in the bladder neck or urethra. They suggested that the ectopic location of the ureter could explain the ejaculation disorder. Viville and Reinhardt² attributed their case to gaping of the bladder neck caused by the large ectopic ureterocele. Ng and Rickards³ thought that in their case the ureterocele appeared to have rendered the bladder neck loose and incompetent (wide-open bladder neck). Lee et al.⁴ assumed that the existing dilated ectopic ureter resulted from a developmental defect of the bladder neck (internal sphincter) in the patient’s earlier life or even in utero, leading to a sequence of retrograde ejaculation later on. Furthermore, it would also appear that the dilated ectopic ureter in some way affected the development of the innervation of the bladder neck.

In our case, cystoscopy revealed the ureterocele lying upon the bladder neck and causing its loose coaptation. Although decompression of ureterocele discarded its mechanic effect, congenital incompetence of bladder neck could persist, since oligospermia improved slightly. Our findings support the assumption that dilated ectopic ureter

or ureterocele in some way may affect the development of the innervation of the bladder neck.⁴

Similar to the reported cases, we observed that surgical incision of ureterocele did not reverse retrograde ejaculation effectively.² Therefore intrauterine insemination with postejaculated urine was offered as the management of the infertility.

In conclusion, ectopic ureterocele should be kept in mind in the differential diagnosis of patients with retrograde ejaculation. MRI and MR urography are useful methods in the diagnosis of such cases. Surgical treatment of ureterocele may not be a remedy for the management of infertility, and assisted reproductive treatment may be offered.

REFERENCES

1. Pryor JP. Erectile and ejaculatory problems in infertility. In: Hargreave TB, ed. *Male Infertility*. 2nd ed. London: Springer-Verlag; 1994. p. 323-36.
2. Viville C, Reinhardt W. [Retrograde ejaculation, a little known complication of ectopic ureterocele with ureteral duplication]. *J Urol (Paris)* 1983;91(8):533-5.
3. Ng KJ, Rickards D. Ectopic ureterocele: a cause of retrograde ejaculation. *Br J Urol* 1994;74(2):251-2.
4. Lee SS, Sun GH, Yu DS, Chen HI, Chang SY. Giant hydronephrosis of a duplex system associated with ureteral ectopia: a cause of retrograde ejaculation. *Arch Androl* 2000; 45(1):19-23.