

A RARE COMPLICATION OF TENSION-FREE VAGINAL TAPE PROCEDURE: INTRA-URETHRAL VAGINAL TAPE

GERİLİMSİZ VAJİNAL BANT İŞLEMİNİN NADİR BİR KOMPLİKASYONU: ÜRETRA İÇİ VAJİNAL BANT

Kenan İSEN*, İlhami ATILGAN**

*Clinic of Urology, Ministry of Health, Diyarbakır Education and Research Hospital, Diyarbakır, TURKEY

**Clinic of Obstetrics & Gynaecology, Çamlıca Women's Health Center, Diyarbakır, TURKEY

Özet

Üretra içi vajinal bant, gerilimsiz vajinal bant (TVT) işleminin nadir görülen bir komplikasyonudur. TVT işlemi sonrası vajinal bant'ı üretra içine yerleşmiş olan 41 yaşındaki bir bayan hasta sunulmuştur. Hastanın semptomları stres inkontinans ve dispareni idi. Hasta antikolinergik ilaç ve vajinal estrogen tedavisi aldı, fakat semptomlarda düzelme olmadı. Hastanın tanısı üretro-sistoskopi ile kondu. Hastaya transvajinal cerrahi yaklaşım uygulandı. Vajinal bant tam olarak çıkarıldı ve üretra onarıldı. Semptomlar işlemden sonraki 1. Ayda düzeldi. Altı aylık takipte herhangi bir komplikasyon görülmedi. Bu vakada olduğu gibi, TVT işlemi minimal risk içermeyebilir. Cerrah TVT işlemi sonrası stres inkontinans ve dispareni şikayetleri devam eden bir hastada üretra içi vajinal bant olabileceğini akılda tutmalıdır. TVT sonrası üretra içi sentetik vajinal bant olan hastada bantın tam olarak çıkarılması için açık cerrahi gereklidir. (Pam Tıp Derg 2009;2(1):35-37).

Anahtar kelimeler: Stres inkontinans, subüretral slingler, komplikasyon

Abstract

Intra-urethral vaginal tape is a rare complication of tension-free vaginal tape (TVT) procedure. A 41-year-old woman with intra-urethral vaginal tape after TVT procedure is presented. The presenting symptoms were urge incontinence and dysparenia. The patient has received anticholinergic drugs and vaginal estrogen, but the symptoms had not been resolved with both this regimen. The diagnosis was made by urethro-cystoscopy. Transvaginal surgical approach was performed to the patient. The vaginal tape was excised completely and urethral defect was repaired. The symptoms were resolved at postoperative 1 month. No complication was observed during 6 months follow-up. Likewise the case, TVT procedure may not imply minimum risk. Surgeon should keep in the mind intra-urethral vaginal tape in a patient who presents with persistent urge incontinence and dysparenia after TVT procedure. Open surgery is necessary for complete removal of intra-urethral synthetic tape after TVT procedure. (Pam Med J 2009;2(1):35-37).

Key words: Stres incontinence, suburethral slings, complication

Introduction

The tension-free vaginal tape (TVT) procedure has become one of the most popular surgical procedures for the treatment of stress urinary incontinence. It is minimal invasive and provides high success rate with low risk of complications [1]. Although is rare, one of the potential complications of TVT procedure is displacement of vaginal tape in to the urethra. Management of this situation depends on the material used. Complete surgical removal of the tape is necessary for intra-urethral synthetic mesh. However, intra-urethral organic mesh can be removed with transurethral resection [1-5]. Recently, transurethral approach has also been recommended for intra-urethral synthetic mesh [6,7]. Herein, a case of intra-urethral vaginal tape after TVT procedure is presented because

of its rarity, the diagnosis and management of this situation is discussed with relevant literature.

Case Report

A 41-year old woman presented with persistent urge incontinence and dysparenia. TVT procedure had been performed due to stress incontinence in another center 6 months previously. The patient has received anticholinergic drugs and vaginal estrogen, but the symptoms had not been resolved with both this regimen. Physical examination was normal. Complete blood count, liver function tests, BUN and creatinine levels were within normal limits. Urine samples showed microscopic haematuria and pyuria. Urine culture was normal. Transvaginal ultrasound (TVUS) and magnetic resonance imaging (MRI) were performed, but both of them did not helpful for the diagnosis. In the middle part of the urethra, the synthetic mesh

Kenan İsen

Ofis cami sok. Ayyıldız Apt. Kat: 5, No:15, Diyarbakır, TR-21100, TURKEY

Tel:+90.532.6180293

E-mail: kenanisen@hotmail.com

was diagnosed by urethro-cystoscopy (Fig. 1). Surgical management was planned, and informed consent was obtained from the patient. Transvaginal surgical approach was performed to the patient. The synthetic (polypropylene) tape was excised completely (Fig. 2), urethral defect was closed over a catheter, and periurethral fascia reapproximated without placement of a labial fat graft. The patient had an uneventful postoperative period and was discharged on the third postoperative day. Urethral catheter was removed 10 days after the procedure. The symptoms resolved at postoperative 1 month. No complication was observed during 6 months follow-up.



Figure 1. Urethroscopic appearance of the intra-urethral synthetic tape.

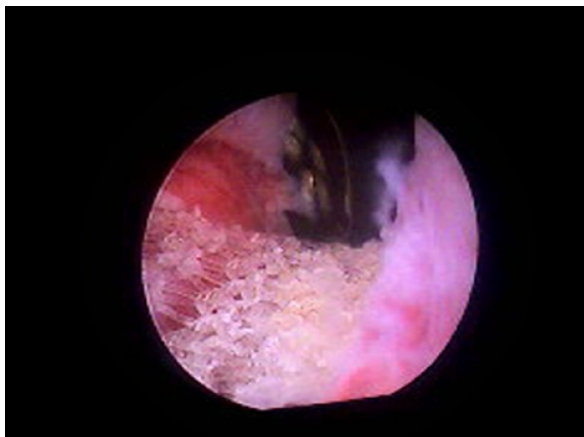


Figure 2. Postoperative appearance of the synthetic (polypropylene) vaginal tape.

Discussion

Intra-urethral vaginal tape is an unusual complication of tension-free vaginal tape (TVT) procedure. The presenting symptoms of the situation are voiding difficulty, urge incontinence, haematuria and pain [1-5]. Standard imaging tests such as TVUS and MRI can be used for diagnosis of intra-urethral vaginal tape. TVUS is recommended for evaluation of the suburethral and paraurethral portions, while MRI is suitable for retropubic evaluation after TVT procedure [8]. Although invasive, urethro-cystoscopy is

necessary to make the correct diagnosis of intra-urethral vaginal tape [1,3,5]. The mean time for the onset of erosion after sling insertion was 11.2 months, therefore there is a need for long-term follow-up of patients with TVT [9]. Similarly, in the present case, the presenting symptoms were urge incontinence and dyspareunia. TVUS and MRI were performed, but both of them were not helpful for the correct diagnosis. The diagnosis was made by urethro-cystoscopy. The onset of the erosion was less than six months. It seems that surgeon should keep in the mind urethro-cystoscopy for the diagnosis of this complication even during six months post-operative period.

The management of intra-urethral mesh depends on the composition of the material. In patients with organic mesh, transurethral incision or partial excision of the mesh may be sufficient to correct problem. In a recent study, Huwyler M et al [10] treated five patients presenting with TVT erosion into the bladder via standard transurethral electroresection. They reported that standard transurethral electroresection seems to be a safe, simple, minimally invasive and successful treatment option for TVT removal. For synthetic mesh, complete excision of the material and urethral repair with or without a labial fat graft is recommended [2-5,11]. Laparoscopic removal of pubovaginal polypropylene tension-free tape sling has also been reported, however most patients continue to have urgency and frequency symptoms following sling removal [12]. Surgical management of this complication is challenging due to the potential for significant patient morbidity. Recently, transurethral approaches have been recommended by some authors for the management of synthetic mesh. McLennan MT [13] reported that synthetic mesh can be removed partially by using an operative cystoscope and hysteroscopic scissors. Quiroz LH et al [6] removed synthetic mesh via transurethral approach under tactile traction, and they reported that this procedure is a minimally invasive approach that avoids the need for a transvaginal procedure. On the other hand, there is no specific instrument for removal of synthetic mesh via transurethral approach and complete removal cannot be achieved during this procedure. Additionally, transurethral approach cannot be performed in some situations that is included with urethral necrosis and proximal urethro-vaginal fistula resulting from vaginal tape [14]. In this case, we used the transvaginal approach with urethrotomy because we did not have specific instrument for removal of synthetic mesh. The tape was excised completely and urethral defect was repaired without a graft. The symptoms were resolved at postoperative first

month, and no complication was observed during the follow-up.

In conclusion, TVT procedure may not imply minimum risk. Intra-urethral vaginal tape should be considered in a patient who presents with

persistent urge incontinence and dysparonia after TVT procedure. Urethro-cystoscopy is mandatory to make a correct diagnosis. Likewise this case, open surgery is necessary for complete removal of intra-urethral synthetic tape after TVT procedure.

References

1. Ghoniem G, Stanford E, Kenton K, et al. Evaluation and outcome measures in the treatment of female urinary stress incontinence: International Urogynecological Association (IUGA) guidelines for research and clinical practice. *Int Urogynecol J Pelvic Floor Dysfunct* 2008;19:5-33.
2. Webster TM, Gerritzen RG. Urethral erosion following autologous rectus fascial pubovaginal sling. *Can J Urol* 2003;10:2068-9.
3. Blaivas JG, Sandhu J. Urethral reconstruction after erosion of slings in women. *Curr Opin Urol* 2004;14:335-8.
4. Powers K, Lazarou G, Greston WM. Delayed urethral erosion after tension-free vaginal tape. *Int Urogynecol J Pelvic Floor Dysfunct* 2006;17:422-5.
5. Pit MJ. Rare complications of tension-free vaginal tape procedure: late intraurethral displacement and early misplacement of tape. *J Urol* 2002;167:647.
6. Quiroz LH, Cundiff GW. Transurethral resection of tension-free vaginal tape under tactile traction. *Int Urogynecol J Pelvic Floor Dysfunct*. 2008 Nov 7. [Epub ahead of print]
7. Wijffels SA, Elzevier HW, Lycklama A, et al. Transurethral mesh resection after urethral erosion of tension-free vaginal tape: report of three cases and review of literature. *Int Urogynecol J Pelvic Floor Dysfunct* 2009;20: 261-3.
8. Schuettoff S, Beyersdorff D, Gauruder-Burmester A, et al. Visibility of the polypropylene tape after tension-free vaginal tape (TVT) procedure in women with stress urinary incontinence: comparison of introital ultrasound and magnetic resonance imaging in vitro and in vivo. *Ultrasound Obstet Gynecol* 2006;27:687-92.
9. Mesens T, Aich A, Bhal PS. Late erosions of mid-urethral tapes for stress urinary incontinence--need for long-term follow-up? *Int Urogynecol J Pelvic Floor Dysfunct* 2007;18: 1113-4.
10. Huwyler M, Springer J, Kessler TM, et al. A safe and simple solution for intravesical tension-free vaginal tape erosion: removal by standard transurethral resection. *BJU Int* 2008;102: 582-5.
11. Madjar S, Tchetgen MB, Van Antwerp A, et al. Urethral erosion of tension-free vaginal tape. *Urology* 2002;59:601.
12. Pikaart DP, Miklos JR, Moore RD. Laparoscopic removal of pubovaginal polypropylene tension-free tape slings. *JSL* 2006;10:220-5.
13. McLennan MT. Transurethral resection of transvaginal tape. *Int Urogynecol J Pelvic Floor Dysfunct* 2004;15:360-2.
1. Siegel AL. Urethral necrosis and proximal urethro-vaginal fistula resulting from tension-free vaginal tape. *Int Urogynecol J Pelvic Floor Dysfunct* 2006;17: 661-4.