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Novel endoscopic management of a late complication following TVT insertion for stress urinary incontinence

Authors' Contribution:
Study Design A
Data Collection B
Statistical Analysis C
Data Interpretation D
Manuscript Preparation E
Literature Search F
Funds Collection G

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Patient: Female, 57
Final Diagnosis: Bladder erosion
Symptoms: Haematuria • irritative bladder symptoms • recurrent UTI
Medication: —
Clinical Procedure: Endoscopic tape resection
Specialty: Urology

Objective: Unusual or unexpected effect of treatment

Background: Since 1995 over 1 million tension free vaginal slings have been utilized to treat stress incontinence. The 10 year success rates range from 84–93%. Complication rates are low by comparision. Bladder perforation occurring during the time of surgery and is managed effectively if diagnosed and treated intraoperatively. However bladder erosion occuring post-operatively predominantly occur within the first 2 years. The risk of erosion increases with body mass index and previous vaginal surgery.

Case Report: We report the case of a bladder erosion occurring 5 years following the original surgery. The symptoms included recurrent urinary tract infections, frequency and haematuria. A novel technique was employed using the transurethral approach to initially disintegrate the calculus and then using an endoshears to excise the mesh below the level of the epithelium. Continence was maintained postoperatively.

Conclusions: This approach provides a safe alternative to both the transvaginal and transabdominal approach to excising intravesical mesh.

Key words: endoscopic • erosion • TVT

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Background

Suburethral sling surgery is based on the integral theory for the diagnosis and management of stress urinary incontinence [1]. Since its development in 1995–1996 by Ulmsten and Petros [2] the tension free vaginal tape (TVT™) (Gynecare; Ethicon Inc., Somerville, NJ, USA) has become a leading treatment choice for women with genuine stress incontinence. It is currently the gold standard treatment for stress urinary incontinence [3]. The efficacy of the procedure has been proven with long-term success rates reported as 84–93% over 10 years [4,5]. Overall complication rates are low ranging from less than 1% to 8%. The majority of complications are minor comprising of haematomas. Operative bladder perforation rates of up to 24% have been reported, in a recent review of over 100 case series bladder perforation was found at a median rate of 4% (IQR 3–7%) [6]. Notably intraoperative identification and appropriate management appears to have no long-term sequelae [7]. TVT erosion rates vary between 0.3–23% with the majority occurring within the first year of placement. The tape can erode into the vagina, bladder, urethra and rectum, with the majority being vaginal.

Case Report

We report the case of a 57-year-old female, that had a TVT inserted for severe urodynamic stress incontinence. During her preoperative assessment she complained of a two-year history of worsening incontinence, which impacted on her quality of life significantly, as she was a keen golf player, urodynamic evaluation showed a stable, normal capacity bladder with severe stress incontinence. A previous course of pelvic floor exercises had failed to improve her symptoms. She had no endocrine or medical disorders, she had no previous surgery and her BMI was normal. Her surgery was carried out under general anesthesia as per hospital protocol, with cystoscopy confirming correct needle placement. She made an excellent postoperative recovery with complete resolution of her symptoms. However 5 years post sling insertion she represented with a three-month history of irritative symptoms including haematuria and recurrent urinary tract infections. Initial investigations included midstream urine which was normal and cystoscopy which confirmed an erosion of the right sling arm with associated calculus formation measuring 3.5×2 cm. A Urological opinion was sought, of note current management of this condition would be open cystectomy and removal of the eroded sling. However as the erosion was visible on the right anterolateral aspect of the bladder and amenable to a minimal access approach the decision was made to perform an endoscopic excision. Using a 22ch cystoscope with a 30-degree lense, the calculus was fragmented using a pneumatic Swiss LithoClast® (EMS, Electro Medical Systems S.A.) the malleable probe was passed down the working sheath of the cystoscope. The ends of the eroded mesh were visualized and divided using a 5mm laparoscopic endoshears. The endoshears was passed through the urethra side by side with the cystoscope, in a similar technique to single port laparoscopy. The mesh was cut deep to the bladder mucosa, thereby facilitating re-epithelialization of the bladder. Cystoscopy was performed at six monthly intervals for two years and these have all been normal. Resection of the tape did not affect the efficacy of the original procedure.

Discussion

Intravesical tape following TVT occurs either due to erosion or secondary to unidentified bladder perforation at the time of surgery. Bladder erosion is a rare long-term complication. To date those reported in the literature occurred within the first two years of insertion [8]. In our case the erosion occurred 5 years following insertion, it is important to be cognizant of the fact that erosion can occur at any period of time. Therefore patients presenting with irritative symptoms should have a cystoscopy as part of the initial investigations to out rule the presence of an intravesical erosion with associated calculus formation. Within the armamentarium for surgically managing complications and in particular intravesical erosions the endoscopic transurethral approach provides a good alternative to the transvaginal or transabdominal approach. A number of cases combined both the transurethral and transabdominal approach [9,10] by placing a trocar intravesically allowing for easy manipulation of the mesh using laparoscopic surgical instruments. However, this approach may be associated with increased risk including bleeding and infection when compared to a complete transurethral approach. We know from previous reports that partial resection is associated with good functional outcomes when the excision occurs within the first two years. We confirm that partial excision can be used to manage late erosion with no adverse effect on continence.

Conclusions

As our case is the first late bladder erosion occurring five years postoperatively it is important to be aware of the possibility of occurrence when a patient who is initially symptom free represents with new symptoms. Initial investigation should include a cystoscopy.

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References:

1. Petros PE, Ulmsten UI: An integral theory of female urinary incontinence. Experimental and clinical considerations. Acta obstet Gynecol Scand Supplement, 1990; 153: 7–31
2. Ulmsten U et al: An ambulatory surgical procedure under local anesthesia for treatment of female urinary incontinence. Int Urogynecol J, 1996; 7(2): 81–85; discussion 85–86
3. Novara G, Artibani W, Barber MD et al: Updated systematic review and meta-analysis of the comparative data on colposuspensions, pubovaginal slings, and midurethral tapes in the surgical treatment of female stress urinary incontinence. Eur Urol, 2010; 58(2): 218–38
4. Serati M, Ghezzi F, Cattoni E et al: Tension-free vaginal tape for the treatment of urodynamic stress incontinence: efficacy and adverse effects at 10-year follow-up. Eur Urol, 2012; 61(5): 939–46
5. Svenningsen R, Staff AC, Schiotz HA et al: Long-term follow-up of the retropubic tension-free vaginal tape procedure. Int Urogynecol J, 2013; 24(8): 1271–78
6. Andonian S, Chen T, St-Denis B, Corcos J: Randomized clinical trial comparing suprapubic arch sling (SPARC) and tension-free vaginal tape (TVT): one-year results. Eur Urol, 2005; 47(4): 537–41
7. Morton HC, Hilton P: Urethral injury associated with minimally invasive mid-urethral sling procedures for the treatment of stress urinary incontinence: a case series and systematic literature search. BJOG, 2009; 116(8): 1120–26
8. Shrotri KN, Shervington JP, Shrotri NC: Laser excision of encrusted intra-vesical tension-free vaginal tape (TVT). Int Urogynecol J, 2010; 21(3): 375–77
9. Huang KH, Kung FT, Liang HM, Chang SY: Management of polypropylene mesh erosion after intravaginal midurethral sling operation for female stress urinary incontinence. Int Urogynecol J, 2005; 16(6): 437–40
10. Negoro H, Kawakita M, Imai Y: Intravesical tape erosion following the tension-free vaginal tape procedure for stress urinary incontinence. Int J Urol, 2005; 12(7): 696–98

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