Complete Mesh Infection Following Repeat Retropubic Tension-Free Vaginal Tape

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Abstract

Background: Midurethral slings are the most widely used surgical treatment for stress urinary incontinence. Complications include bladder injury, voiding dysfunction, mesh exposure/erosion, dyspareunia, and failure to correct the incontinence. Complete mesh infection is rare.

Case: A 48-year-old woman underwent a repeat retropubic tension-free vaginal tape (TVT) procedure for stress urinary incontinence. She presented eight weeks postoperatively with a tender suprapubic mass and urinary retention. A CT scan demonstrated thickening of the bladder wall and cystoscopy revealed severe inflammation with no intramural injury. The sling appeared to be infected and was removed vaginally. The patient's symptoms resolved following removal of the sling.

Conclusion: Mesh infection following a midurethral sling procedure is rare. In suspected cases, cystoscopy should be performed to rule out bladder injury. Antibiotic therapy may be successful, but removal of the sling may be required for resolution of symptoms.

Résumé

Contexte : Les frondes mi-urétrales sont le traitement chirurgical le plus communément utilisé pour l'incontinence urinaire à l'effort. Les complications qui y sont associées comprennent les lésions vésicales, la dysfonction mictionnelle, l'exposition au treillis ou son érosion, la dyspareunie et l'incapacité de rectifier l'incontinence. Les infections complètes du treillis sont rares.

Cas : Une femme de 48 ans a subi une réintervention rétropubienne par TVT (« tension-free vaginal tape ») pour résoudre son problème d'incontinence urinaire à l'effort. Huit semaines après l'opération, elle avait une masse sus-pubienne sensible et souffrait de rétention urinaire. Une tomodensitométrie a démontré l'épaississement de la paroi vésicale, alors qu'une cystoscopie a révélé une inflammation sévère sans lésion intramurale. La fronde semblait être infectée et a été retirée par le vagin. Les symptômes de la patiente se sont résorbés après le retrait de la fronde.

Conclusion : Les infections du treillis à la suite d'un traitement à fronde mi-urétrale sont rares. Si l'on soupçonne une telle infection, on devrait effectuer une cystoscopie pour exclure la possibilité de lésions vésicales. Le traitement par antibiotiques peut être efficace, mais le retrait de la fronde s'avère parfois nécessaire pour la résolution des symptômes.

Key Words: Tension-free vaginal tape, complications, infection

Competing Interests: None declared.

Received on February 3, 2016

Accepted on May 5, 2016

http://dx.doi.org/10.1016/j.jogc.2016.05.004

J Obstet Gynaecol Can 2016;38(9):839–842

INTRODUCTION

In the management of stress incontinence in women, midurethral slings are the most common surgical option.[1] The long-term subjective cure rate ranges from 50% to 88%,[2] comparable to that after a Burch colposuspension.[1] The average long-term rate of repeat incontinence surgery is 5%.[2] Sling procedures are also effective in the management of recurrent stress incontinence.[1] The most common complications after midurethral slings are intraoperative bladder injury, postoperative voiding dysfunction, de novo urgency, mesh exposure/erosion, dyspareunia, and recurrent stress urinary incontinence.[2] The incidence of tape-related complications ranges from 2% to 10%.[3] Short-term delayed complete mesh infection is a rare complication; we report here a case of complete mesh infection after a repeat retropubic tension-free vaginal tape (TVT) procedure for recurrent stress urinary incontinence.

THE CASE

A 48-year-old, multiparous woman presented to a community hospital six weeks after an uncomplicated TVT procedure with symptoms of voiding dysfunction and suprapubic pain. Prophylactic antibiotic therapy (using cephalexin) had been given preoperatively. The patient had undergone an uncomplicated TVT procedure seven years previously for stress incontinence.

On examination, a tender and erythematous suprapubic mass was noted, and hematuria was identified, but multiple urine cultures were negative. Oral antibiotic therapy was begun, and an indwelling transurethral catheter was inserted.

Her condition did not improve on either oral trimethoprim-sulfamethoxazole or clavulanic acid. A CT scan was therefore performed. This showed a diffusely abnormal appearance of the bladder with extensive thickening of the wall, perivesicular fat stranding, and inflammation in the subcutaneous fat extending to the upper labia. No abscess or hematoma was identified. She was transferred to our tertiary care centre for further evaluation and treatment.

On admission, the patient was tachycardic. White blood cell count was 8.0×10^9/L with a neutrophil count of 4.1×10^9/L. She had a palpable 7 × 5 cm left sided suprapubic mass that was erythematous and extremely tender (Figure 1). Treatment was begun with clindamycin and tobramycin intravenously, and after 24 hours of intravenous antibiotics, she underwent surgical exploration.

At cystoscopy, no bladder perforation or mesh was seen. However, there was extensive inflammation involving the anterior and lateral surfaces of the bladder (Figures 2 and 3). Although this vesicular inflammation involved the left ureteric orifice, bilateral ureteric jets were noted. It was decided to remove the TVT mesh because of suspected mesh infection. During dissection, the suburethral tissue was noted to be very hypertrophic and friable. After making a small vertical incision under the urethra, bilateral periurethral tunnels were dissected bluntly to the level of the pubic rami. The mesh was easily identified in the midline, dissected off the urethra, and divided. With gentle traction on the cut ends of the mesh, both sides were removed intact (Figure 4). The suprapubic end of the mesh was coated in purulent material on both sides (Figure 5). The indurated suprapubic mass was confirmed as reactive cellulitis and not an abscess. Because we were able to remove the entire mesh using a vaginal approach, and because imaging had suggested that the suprapubic mass was not an abscess, the decision was made not to debride the suprapubic area surgically.

Postoperatively, the patient's suprapubic pain improved rapidly. She remained on intravenous antibiotic therapy for 48 hours, and subsequently was treated with oral clavulanic acid for 10 days. On the second postoperative day, the indwelling transurethral catheter was removed;

Figure 1. Large left sided erythematous suprapubic mass. TVT incision sites indicated by arrows

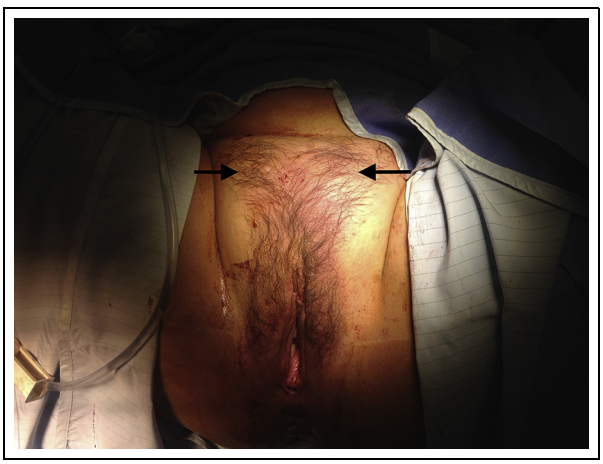

Figure 2. Extensive vesicular inflammation involving lateral surface of the bladder and the left ureteric orifice

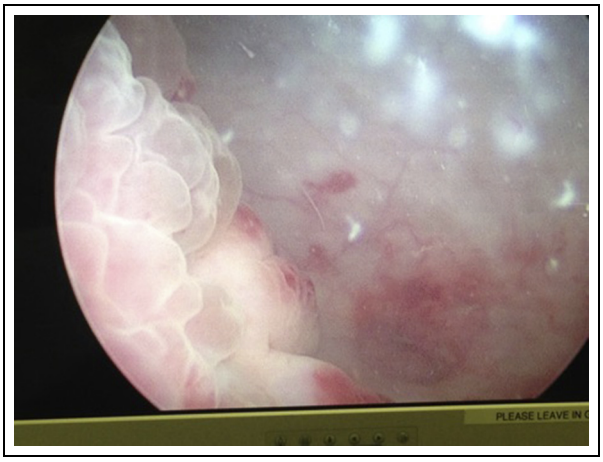

Figure 3. Extensive vesicular inflammation involving the anterior surface of the bladder