

# Obturator and Thigh Abscess after Transobturator Tape Implantation for Stress Urinary Incontinence

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## Key Words

Abscess · Tension-free vaginal tape · Complication · Transobturator tape

## Abstract

We report a case of obturator and thigh abscess 2 years after transobturator tape implantation (TVT-O) for stress urinary incontinence. Fifteen months after sling implantation repeated incisions and drainages of multiple recurrent thigh abscesses were performed. The source of infection, an eroded TVT-O, was only identified on readmission 9 months later when vaginal discharge was reported by the patient. Magnetic resonance imaging was performed because of tenderness and pain in the leg which revealed a large obturator and thigh abscess. The TVT-O was completely excised and the abscesses drained. Further follow-up was uneventful. This new technique of sling placement via the obturator route may be associated with novel infectious complications. Symptoms and signs as well as imaging modalities and conservative versus surgical management are discussed and the literature reviewed.

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## Case Report

A 42-year-old female presented to our emergency department with vaginal discharge and increasing pain in her right thigh. Her right thigh was tender and swollen, inspection of the vagina showed perforation of the transobturator tape (TVT-O) which

had been inserted 2 years previously for stress urinary incontinence.

She had been treated in the surgical department of another hospital 9 months before for multiple and recurrent right-sided thigh abscesses with repeated incisions and drainages over a period of 5 weeks. Microbiology had grown *Chlamydia trachomatis*, but as the patient had not suffered from vaginal discharge or pain no gynecological examination was performed. Finally, under continuous administration of antibiotics, symptoms had resolved and secondary wound closure had been possible.

At presentation she had fever (38.5°C), her right thigh was tender and swollen, inspection of the vagina showed perforation of the TVT-O through the vaginal mucosa below the urethral orifice.

White cell count was 13.6/nl (<10) and CRP 29.1 mg/dl (<0.5). A magnetic resonance imaging study was performed of the pelvis and thighs which revealed an obturator abscess of 2 × 1.1 × 2.7 cm and a large thigh abscess of 4.7 × 1.8 × 4.3 cm on the right side, joined together (fig. 1).

The TVT-O was removed under anesthesia and the obturator and thigh abscesses were incised and drained, she received oral antibiotics (Cefuroxim) and further follow-up was uneventful. Microbiology did not grow any pathologic bacteria. Two months after operation the wounds were seen to be closing and the patient was asymptomatic.

## Discussion

The TVT-O sling is becoming a widely accepted procedure for the treatment of female urinary incontinence [1]. Our case reveals an unusual complication arising with considerable latency after the procedure; the diagnosis was initially missed and lead to considerable mor-



**Fig. 1.** Magnetic resonance imaging with a  $4.7 \times 1.8 \times 4.3$  cm right thigh abscess (arrow) and a  $2.0 \times 1.1 \times 2.7$  cm right obturator abscess (arrowhead).

bidity for the patient. As urologists are increasingly interested in female incontinence surgery and also operating TVT-O, knowledge of the potentially serious complications associated with the procedure is mandatory.

Thigh abscess is a new complication of suburethral sling surgery. It can be explained by the different anatomical route of the TVT-O along the obturator fossa compared to the classical retropubic transvaginal tape (TVT). In most cases it is due to vaginal erosion of the sling and subsequent infection.

Although previous reports have suggested that the rate of sling erosion might be higher in TVT-O compared to TVT, Neuman [2] reported a rate of 0.7% of vaginal tape protrusion in a recent prospective study on 300 TVT-O procedures, this being comparable to the TVT procedure. Importantly, the erosions were repaired under anesthesia without further sequelae by simply covering the protrusion with surrounding vaginal mucosa.

In the case of vaginal erosion of the tape and concomitant infection, partial or complete removal of the tape is

recommended, depending on the size of the erosion and the status of infection [3]. After a combined prepubic TVT and a subsequent TVT-O procedure, Deffieux et al. [4] reported on the removal of only the suburethral portion of an infected sling with a subsequent thigh abscess 9 months later, thus confirming the importance of complete removal of infected sling material. Deval and Haab [3] recommended removal of any sling in the case of infection and vaginal erosion, but also if the size of vaginal erosion is  $>1$  cm or the material of the eroded sling is heat-welded polypropylene.

Only a few other cases of thigh abscesses after TVT-O have been published, all occurred within a few days after operation [5] or up to 9 months postoperatively [6, 7]. In all cases a malodorous vaginal discharge was noted and perforation of the TVT-O was found on vaginal examination, patients complained of pain in the affected leg. As the recommended management of obturator abscesses ranges from conservative management with antibiotics to aggressive surgical drainage [4, 5, 7], magnetic resonance imaging should be performed to assess the extent of infection [3].

In our case multiple thigh abscesses had been repeatedly incised and drained over a period of more than 1 month. Although *Chlamydia* were grown in the microbiology swab, suggestive of a vaginal focus of infection, no gynecological examination was performed. Indeed, patients normally complain of vaginal discharge, bleeding, dyspareunia, urinary tract infection or persistent vaginal or urethral pain in case of tape erosion [3]. We assume that a vaginal erosion was probably missed in our patient, as she had no local symptoms. Interestingly, she remained asymptomatic after initial treatment for another 9 months, before she presented with symptoms of vaginal discharge and pain in her hip and leg. We hypothesize that the delay of diagnosis of TVT-O perforation and concomitant infection could be responsible for this serious infectious complication and this underlines the importance of early identification of tape erosion. We believe that it is necessary for any urologist treating women with stress urinary incontinence to be aware of this new complication related to the TVT-O procedure. Importantly, patients should also be consulted on the possibility of late abscesses. Informed patients could direct doctors who are not familiar with TVT complications to this problem and avoid long and painful disease courses.

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