Case Report

Acute and Serious Myositis with Abscess in Thigh Muscle after Transobturator Tape Implantation

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The complications of transobturator tape (TOT) were known as lower urinary tract injury, postoperative urinary retention, urge incontinence, vaginal erosion, and etc. A 63-year-old woman presented with new onset of severe pain, heating, and swelling of the left thigh and perineum. She had undergone TOT implantation for stress urinary incontinence (SUI) 4 days previously in an outside clinic. Painful left thigh swelling and skin erythema were noted on the physical examination. A computed tomography (CT) scan showed multiple, large left medial thigh and obturator abscesses. Removal of the implanted tape and abscess drainage were performed immediately and two additional operations were needed for proper abscess drainage. We believe this case to be one of the most serious complications to occur since the introduction of the TOT procedure. Here we report this case and discuss its initial management along with a review of the literature. Int Neurourol J 2010;14:182-5.

Key words: Suburethral slings, Abscess myositis, Urinary stress incontinence

Since the self-retaining synthetic midurethral sling was developed in 1995 for the treatment of female stress urinary incontinence (SUI), many surgical materials and techniques have been developed and the procedure has become the most common procedure for treating SUI. A new technique called the transobturator tape (TOT) procedure was developed by Delorme in 2001 in an effort to reduce injuries to the urinary bladder and other visceral organs [1]. The TOT consists of a nonwoven, thermally bonded polypropylene tape that is positioned between the two obturator foramen from outside to inside. Although transobturator slings appear to enjoy success rates similar to those of retropubic slings in properly selected patients, the novel route of implantation such as through the obturator foramen and thigh muscle can introduce a new set of complications [1]. One of the most common complications of midurethral slings is erosion of the implanted mesh, the rate of which is less than 5% [2]. Recently, we managed a serious complication caused by the TOT procedure. Here we report this case.

Case

A 63-year-old woman presented with new onset of severe pain, heating, and swelling of the left thigh and perineum. She had undergone the TOT procedure for SUI 4 days earlier in an outside clinic. She had previously been healthy and had no specific illnesses or operation history. On the physical examination, she looked seriously ill...
and had a fever (38.5°C). Left medial thigh muscles and groin were swollen and tender on palpation, and the skin was erythematous and desquamated (fig. 1). Leukocytosis (18.4x10^3/μL), thrombocytopenia (87.0x10^3/μL), and elevated CRP (40.13 mg/dL) were checked on the laboratory test. A CT imaging study showed a severely swollen left thigh muscle, a 2.0x1.0x1.1 cm sized abscess from the vaginal wound site to the obturator muscle, and a 16.0x6.2x2.1 cm sized large abscess along the muscle fascia at the adductor compartment on the left thigh (fig. 2). Given the acute infectious condition, we began intravenous broad-spectrum antibiotics and performed immediate surgical exploration with the patient under general anesthesia to remove the implanted TOT tape and drain the abscesses (fig. 3). *Pseudomonas putida* and methicillin-resistant *Staphylococcus aureus* were reported in the culture from the drained abscess. Because, not only was the abscess cavity septate, but the infectious process was also not easily controlled, and the patient had to undergo two additional operations for abscess drainage. Two months after the initial operation, all drain catheters were removed and the wounds had healed (fig. 4). The patient was asymptomatic and was discharged uneventfully.

**Discussion**

The tension-free vaginal tape (TVT) operation was previously the minimally invasive surgical procedure of choice for SUI. Since the new technique called the TOT procedure was introduced in 2001, the TOT sling has been shown to be at least as safe and efficacious as the TVT. Thus, the TOT procedure has become a widely accepted procedure for the treatment of female urinary incontinence [1]. The TOT procedure is performed by a different anatomical route along the obturator fossa compared with the classic retropubic TVT. Compared with the TVT procedure, the TOT procedure has a decreased rate of injury to the bladder and other visceral organs [3]. However, the TOT has new risks for complica-

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**Figure 1.** Gross photography (A) desquamating (white arrow-head) and erythematous (white arrow) lesion of left medial thigh was shown (B) erythematous skin was also shown on left posterior side of thigh.

**Figure 2.** Computed tomography (CT) revealed an abscess formation (white arrow): (A) groin area (axial view) (B) adductor muscle compartment of left medial thigh (coronal view).
lations associated with its placement thus, it is very important to keep in mind the possibility of the potentially serious complications associated with the procedure [4].

Several complications of the TOT procedure have been reported. The minor complications include lower urinary tract injury, postoperative urinary retention, urge incontinence, and pain in the groin or thigh not related to a serious condition that can be controlled by medication or observation. However, major complications such as vaginal erosions and muscle abscess formation can cause very serious problems [5,6]. In many cases, vaginal erosion of the implanted mesh before serious infection could be a source of bacterial contamination, because the implanted tape could serve as a conduit for bacteria from the vagina to gain entry to this space [7].

There are few reports in the literature describing similar severe thigh abscesses in association with vaginal erosions of TOT [8,9]. Goldman reported on the appearance of cellulitis within 36 hours and abscess formation between the adductor magnus and brevis muscle 5 days after TOT [8]. Also, Deffieux et al reported on the partial removal of only the suburethral portion of an infected sling, which presented a subsequent thigh abscess 9 months later [6]. Our case was very severe and urgent because the disease course was fulminant, and the septate abscess cavity made drainage difficult. Thus, the patient had to undergo two additional operations.

Major complications caused by the TOT operation can be perplexing for both the surgeon and the patient, and we believe this case to be one of the most serious complications to occur since the introduction of the TOT procedure. Therefore, surgeons should keep in mind the possibility of major risks. The most recommended management in the literature is immediate and complete tape removal, aggressive abscess drainage, and intravenous broad-spectrum antibiotics administration [5-9]. However, the most important point is the early identification of tape erosion, because the management response is directly influenced by the timing of treatment. Implanted tape erosion can lead to vaginal discharge, bleeding, dyspar-

Figure 3. Infected transobturator tape was completely removed.

Figure 4. Computed tomography (CT) showed an absence of previous abscesses (white arrow) (A) axial view (B) coronal view: CT was also shown the parapelvic cyst on the left kidney (white arrowhead).
eunia, urinary tract infection, or persistent vaginal and urethral pain in most patients [5]. Therefore, it is immensely important for the urologist not to ignore suspected symptoms of tape erosion or other signs of infection that have a possibility of serious complications [10].

In conclusion, early detection and initial aggressive management of serious complications after the TOT operation are important, because the patient’s condition and hospital course depend on the timing of initial management.

Conflicts of Interest:

The authors have nothing to disclose.

References

8) Goldman HB. Large thigh abscess after placement of synthetic transobturator sling. Int Urogynecol J Pelvic Floor Dysfunct 2006;17:295-6