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Title: Vaginocutaneous fistula and buttock abscess formation 7 years
after polypropylene transobturator tape insertion

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Corresponding Author: Dr. Alain Abdallah, M.D.

Corresponding Author's Institution: CHR Citadelle

First Author: Alain Abdallah, M.D.

Order of Authors: Alain Abdallah, M.D.; Michelle Nisolle, M.D., PhD;
Laurent de Landsheere, M.D., PhD.

Abstract: Surgical treatment for stress urinary incontinence (SUI) using transobturator tape insertion is widely accepted. However several postoperative complications were reported in the literature including infections, abscess and fistula formation. Here we report a case of 57 year old female who presented with abscess and left vaginocutaneous buttock fistula 7 years after transobturator polypropylene tape insertion. Treatment included abscess drainage with dissection of the fistulous tract and removal of the left arm of the transobturator tape along with antibiotic coverage. Sinus drainage stopped after 3 days. Stress urinary incontinence didn't recur. Suspicion of fistula formation should rise in patients presenting with bothersome vaginal or cutaneous discharge after transobturator tape insertion. This case is particular since it describes a fistula complication with polypropylene tape which is unusual with this type of tapes. Treatment of such complication should always consist of surgical removal of the mesh to allow closure of the fistulous tract.

Opposed Reviewers:

Case Report

Vagino-cutaneous fistula and buttock abscess formation 7 years after polypropylene transobturator tape insertion

Alain Abdallah, Michelle Nisolle, Laurent de Landsheere

Manuscript authors:

- A Abdallah, MD. Obstetrics and gynecology. Department of obstetrics and gynecology. Centre hospitalier regional de la Citadelle. Liege - Belgium: Manuscript writing.
- M Nisolle, MD. Obstetrics and gynecology, minimally invasive gynecological surgery. Chairperson. Department of obstetrics and gynecology. Centre hospitalier regional de la Citadelle. Liege - Belgium: Manuscript editing.
- L de Landsheere, MD. Obstetrics and gynecology, urogynecology. Department of obstetrics and gynecology. Centre hospitalier regional de la Citadelle. Liege - Belgium: Manuscript editing.

FINANCIAL DISCLAIMER/CONFLICT OF INTEREST: NONE FOR ALL THREE AUTHORS

INSTITUTIONAL REVIEW BOARD IS NOT NEEDED SINCE IT IS A CASE REPORT

Corresponding author:

Alain Abdallah, MD. Department of Obstetrics and Gynecology, University of Liège, CHR La Citadelle, Boulevard du 12^e de ligne, n°1 4000 Liège, Belgium

E-mail: alain.abdallah50@gmail.com; Phone: 0032 472 54 13 34; 00961 3 592321

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1 **Case Report**

2

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8 hospitalier regional de la Citadelle. Liege - Belgium: Manuscript writing.
- 9 - M Nisolle, MD. Obstetrics and gynecology, minimally invasive gynecological surgery.
10 Chairperson. Department of obstetrics and gynecology. Centre hospitalier regional de la
11 Citadelle. Liege - Belgium: Manuscript editing.
- 12 - L de Landsheere, MD. Obstetrics and gynecology, urogynecology. Department of obstetrics and
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20 E-mail: alain.abdallah50@gmail.com; Phone: 0032 472 54 13 34; 00961 3 592321

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23 Fistula, stress urinary incontinence, transobturator tape.

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25 **Abstract**

26 Surgical treatment for stress urinary incontinence (SUI) using transobturator tape insertion is widely
27 accepted. However several postoperative complications were reported in the literature including
28 infections, abscess and fistula formation. Here we report a case of 57 year old female who presented
29 with abscess and left vaginocutaneous buttock fistula 7 years after transobturator polypropelene tape
30 insertion. Treatment included abscess drainage with dissection of the fistulous tract and removal of the
31 left arm of the transobturator tape along with antibiotic coverage. Sinus drainage stopped after 3 days.
32 Stress urinary incontinence didn't recur. Suspicion of fistula formation should rise in patients presenting
33 with bothersome vaginal or cutaneous discharge after transobturator tape insertion. This case is
34 particular since it describes a fistula complication with polypropelene tape which is unusual with this
35 type of tapes. Treatment of such complication should always consist of surgical removal of the mesh to
36 allow closure of the fistulous tract.

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43 **Introduction**

44 Stress urinary incontinence (SUI) is a frequent condition and affects 4 – 35 percent of women.^{1,2}
45 Treatment of SUI can be conservative including behavioral changes, weight loss, Kegel exercises,
46 biofeedback, pessaries, electrical stimulation, or surgical (i.e. Burch colposuspension,...etc). Minimally
47 invasive surgeries for SUI have become popular nowadays with high success rates. However this type of
48 surgeries is not without complications. Many cases of mesh exposure and fistula formation have been
49 reported in the literature.³⁻⁵ In this article we present a case of vaginocutaneous fistula and buttock
50 abscess formation seven years after transobturator polypropylene tape insertion, an unusual
51 complication with this type of tapes.

52

53 **Case**

54 A 57 year-old woman with stress urinary incontinence underwent a transobturator tape (polypropylene
55 type: Gynecare TVT-O[®] based on the operative report we got) insertion in another hospital 7 years prior
56 to presentation. Six years later, the patient had vaginal tape exposure and underwent a surgical repair
57 during which the defect was primarily closed and mesh was left in place. One year later she started to
58 complain of pain and purulent discharge from her left buttock. Physical examination identified a sinus in
59 the left buttock (fig. 1) draining purulent fluid along with an abscess formation at this site. Outpatient
60 Incision and drainage were performed with antibiotic coverage. A magnetic resonance imaging (MRI) of
61 the pelvis done after abscess drainage confirmed the presence of a fistulous tract from the
62 urethrovaginal mucosa till the left ischio-rectal and ischio-anal fossas (fig. 2). Based on these findings,
63 the decision for surgical treatment was taken. During the surgery we identified a defect in left
64 paraurethral vaginal mucosa (fig. 3). Further sharp easy dissection of this defect lead us to the left arm
65 of the tape which was resected by simultaneous dissection and traction (fig. 4). The right arm of the

66 tape was left in place since it was not exposed. Three days later, sinus drainage stopped. Stress urinary
67 incontinence did not recur in this patient after mesh removal.

68 **Discussion**

69 During the last decade, surgical treatment of SUI using suburethral slings have been widely accepted.
70 However this technique, although being minimally invasive, was associated with a certain risk of
71 complications that have been reported in the literature leading researchers to work on better sling
72 material and techniques. The risk for mesh exposure was directly associated with the type of material
73 used during suburethral sling procedures and this could be due to the tendency for bacterial
74 colonization of the mesh used.⁶ Monofilament polypropylene macroporous (> 75 µm) mesh have lesser
75 rate of erosion and infection because of its biocompatibility, tolerance and less inflammatory reaction.
76 However our patient had erosion and fistula formation with this type of mesh. In our case, complications
77 occurred 6 years after tape placement and this is also an unusual finding; since most sling complications
78 occur in the first two years after tape insertion.⁶ Sahin et al, reported a case of vaginocutaneous fistula
79 and inguinal abscess formation six years after tension-free vaginal tape sling,⁴ which was treated with
80 sling mesh dissection and removal from the fistulous tract. Goldman reported a case of gracilis and
81 adductor muscles abscess formation after transobturator tape insertion and the patient was treated
82 with complete removal of the mesh⁷. Similarly, Lee et al, reported a case of recurrent bilateral thigh
83 abscess 5 years after transobturator tape insertion and the treatment was also by removal of the mesh⁸.
84 Ugurlucan et al, reported a case of recurrent obturator abscess with spontaneous expulsion of the mesh
85 4 years after transobturator tape insertion in a 36 year old female⁹. The patient presented with fever,
86 persistent swelling in the left groin, and spontaneous expulsion of the mesh. Fistula formation was
87 diagnosed and the treatment was based on antibiotics and surgical removal of remaining necrotic
88 material after dissection of the fistulous tract. The case that we presented ended up with the same
89 treatment consisting of surgical removal of the mesh and treatment with antibiotics which seems the

90 only curative way to treat abscess and fistula formation in these cases. Risk factors for mesh erosion and
91 fistula formation include a history of pelvic irradiation, the presence of cancer, infection and
92 menopause. Our patient had menopause alone as a risk factor and this might explain the occurrence of
93 cited complications in the absence of estrogen supplementation. However her menopause occurred at
94 the age of 51 and she did not receive hormone replacement therapy. It is possible that erosion and
95 fistula formation could be secondary to the lack of estrogen, however it's a late occurring complications.
96 Another explanation for this type of late occurring complication could be very late reaction of body to
97 mesh. One potential way to prevent mesh exposure in postmenopausal patients is to supplement by
98 vaginal estrogen. We hope that in the future, this type of complications will be significantly reduced with
99 the use of mini slings.

100

101 **Conclusion**

102 Although suburethral sling procedure is a minimally invasive widely accepted surgical treatment for SUI,
103 it is not without complications which might be severe in some cases. We presented a case of
104 vaginocutaneous fistula and buttock abscess formation 7 years after transobturator monofilament
105 polypropylene tape insertion, an unusual invalidating complication with this type of tapes, that was
106 interfering with patient's daily activities. This case highlights the need for high index of suspicion for
107 fistula formation after transobturator tape placement even when monofilament polypropylene mesh is
108 used. The best treatment in such complication consists of tape removal in order to suppress the
109 inflammatory and infectious process allowing the closure of the fistulous tract.

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154 **Figure Legends**

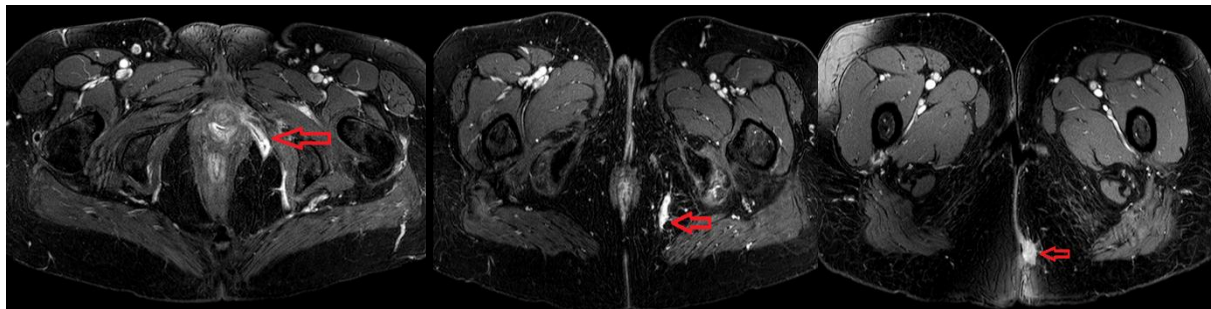


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Fig. 1 Left buttock sinus

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Fig. 2 MRI images showing the fistulous tract from the urethrovaginal mucosa till the left ischio-rectal and ischio-anal fossas.

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Fig. 3 Left paraurethral vaginal mucosal defect.

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Fig. 4 Dissection of the fistulous tract and removal of the left arm of the transobturator polypropylene tape.

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Dear Editors,

Thank you for your comments and consideration of this manuscript. Attached is the new manuscript in the form of case report with the corrections you asked for.

Sincerely yours

Alain Abdallah