

Delayed sigmoid colon perforation and enterocutaneous fistula due to tension free transvaginal tape operation for stress urinary incontinence

In Kyu Lee, MD, PhD;* Dong Wan Sohn MD, PhD†

*Department of Surgery, Yeuido St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Seoul, Korea; †Department of Urology, Yeuido St. Mary's Hospital, College of Medicine, The Catholic University of Korea, Seoul, Korea

Cite as: *Can Urol Assoc J* 2015;9(3-4):E208-9. <http://dx.doi.org/10.5489/cuaj.2680>
Published online April 13, 2015.

Abstract

A 56-year-old female patient presented with sustained sigmoid colon perforation at the time of a tension-free vaginal tape (TVT) procedure and subsequently developed enterocutaneous fistula and subcutaneous abscess. She came to our emergency department complaining of left lower abdominal tenderness and swelling for 2 weeks previously. Her right thigh also was tender and swollen. A foreign body in sigmoid colon and subcutaneous abscess were found on computed tomography scan. We diagnosed the perforation of sigmoid colon and enterocutaneous fistula by TVT mesh. We performed laparoscopic excision of the mesh in sigmoid colon. We performed transobturator tape surgery for recurrence of stress urinary incontinence after 6 months.

Introduction

The tension-free vaginal tape (TVT; Gynecare, Sommerville, NJ) became the standard procedure for stress urinary incontinence (SUI) after being introduced in 1996.¹ Since then, other retropubic and more recently transobturator tapes (TOT) have been introduced, making midurethral sling procedures less invasive and safer. Despite relatively low complication rates, the blind nature of the minimally invasive procedure carries the potential for serious risks of vascular, gastrointestinal, and urologic injuries.^{2,3} We recently experienced the case of delayed detected sigmoid colon perforation and enterocutaneous fistula due to TVT tape operation after 7 years.

Case report

The patient presented to our emergency department complaining of left lower abdominal tenderness and swelling

for 2 weeks previously. Her right thigh also was tender and swollen. Her medical history was significant for TVT procedure 7 years ago at a local clinic.

She visited our clinic with vaginal discharge and foreign body sensation 5 months prior to the colon perforation. She had a vaginal erosion of TVT tape on vaginal exam. She had undergone removal of the suburethral polypropylene mesh. However at that time, complete removal of the mesh was impossible because pulling the right part resulted in snapping of the mesh adhered to the tissue.

On physical examination, pain and swelling of the left lower abdomen and the right medial thigh area was palpable. There was a 2 × 2-cm sized area of swelling that protruded about 0.5 cm. The patient's vital signs were normal, but urinalysis showed pyuria, and her C-reactive protein (CRP) was elevated. Computed tomography (CT) of the abdomen was performed to determine an accurate size of the abscess. The CT showed the subcutaneous abscess located in lower abdomen and foreign body in sigmoid colon (Fig. 1). We diagnosed the perforation of sigmoid colon and enterocutaneous abscess and fistula. We did not consider TVT mesh as the cause. Therefore, we tried to do laparoscopic approach and then found the mesh. We successfully performed laparoscopic sigmoid colon wedge resection and excision of the mesh in sigmoid colon and peritoneal wall (Fig. 2). After 6 months, SUI recurred and TOT surgery was performed again.

Discussion

Delayed bowel complications are very rare because bowel injuries after TVT are detected promptly. Westermann and colleagues reported the delayed presentation of an enterocutaneous fistula 5 months following TVT sling.⁴ The enterocutaneous fistula, including the involved small bowel, portion of TVT, and subcutaneous sinus tract, was resected.

When bowel injury is suspected, it should be promptly evaluated with CT or plain film of the abdomen. The pres-

ence of free air or obstruction on plain film should prompt further evaluation. A CT scan may reveal the site of perforation or fixation, the presence of a collection, or intestinal loops in contact with the anterior surface of the pubis. After bowel injury is confirmed, exploratory laparotomy with excision of mesh and repair of bowel should be performed promptly. Presently, the laparoscopic approach was available and minimally invasive. We removed the TVT mesh completely by laparoscopic approach. SUI recurred after 6 months, prompting TOT surgery.

Conclusion

When anti-SUI surgery is performed, the surgeon should be wary to prevent bowel injury. If bowel injury is suspected, immediate exploratory laparotomy is necessary. Laparoscopic surgery is safe and efficacious method to remove the tape and repair the bowel.

Competing interests: The authors declare no competing financial or personal interests.

This paper has been peer-reviewed.

References

1. Ulmsten U, Henriksson L, Johnson P, et al. An ambulatory surgical procedure under local anesthesia for treatment of female urinary incontinence. *Int Urogynecol J Pelvic Floor Dysfunct* 1996;7:81-5. <http://dx.doi.org/10.1007/BF01902378>
2. Phillips L, Flood CG, Schulz JA. Case report of tension-free vaginal tape-associated bowel obstruction and relationship to body habitus. *Int Urogynecol J Pelvic Floor Dysfunct* 2009;20:367-8. <http://dx.doi.org/10.1007/s00192-008-0722-8>
3. Fourie T, Cohen PL. Delayed bowel erosion by tension-free vaginal tape (TVT). *Int Urogynecol J Pelvic Floor Dysfunct* 2003;14:362-4. <http://dx.doi.org/10.1007/s00192-003-1068-x>
4. Westermann L, Brown A, Long JB. Delayed presentation of an enterocutaneous fistula after tension-free vaginal tape sling. *Female Pelvic Med Reconstr Surg* 2011;17:258-9.

Correspondence: Dr. Dong Wan Sohn, Department of Urology, Yeuido St. Mary's Hospital, The Catholic University of Korea, 10, 63-ro, Yeongdeungpo-gu, Seoul, 150-713 Korea; uroking@naver.com

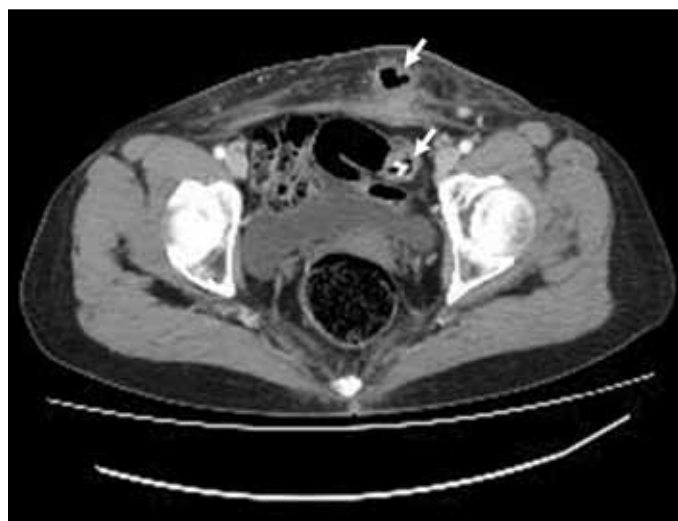


Fig. 1. A computed tomography showing the subcutaneous abscess located in lower abdomen and a foreign body in the sigmoid colon (arrow).

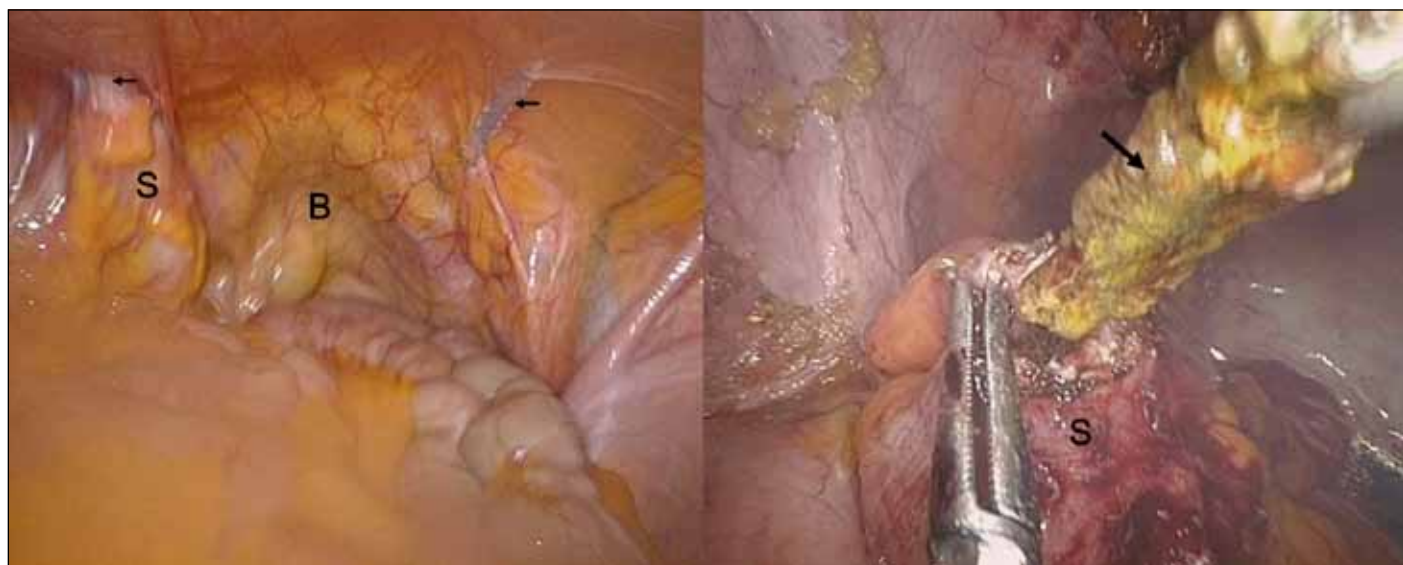


Fig. 2. Laparoscopic findings showed tension-free vaginal tape mesh (arrow) attached to the abdominal wall and sigmoid colon. This mesh was removed and the colon was repaired. S: Sigmoid colon, B: Bladder.