

Severe Vulva Edema following Transobturator Tape Procedure with Small Intestinal Submucosa (Surgisis): A Case Report

Cheng-Yu Long, M.D., Ph.D.^{1,2}

Department of Obstetrics and Gynecology¹, Kaohsiung Municipal Hsiao-Kang Hospital, Kaohsiung Medical University, Kaohsiung, Taiwan; Graduate Institute of Medicine², Faculty of Medicine, College of Medicine, Kaohsiung Medical University, Kaohsiung, Taiwan

CASE REPORT

A 49-year-old woman presented to our institution with involuntary urinary leakage during exertion for more than two years. Stress urinary incontinence had been proven by urodynamic study and a positive pad test. A transobturator sling procedure with Surgisis (Cook Inc., West Lafayette, IN, USA) was then performed. A single dose of prophylactic antibiotics with 1 gram of cefazolin (Cefamezin, Fujisawa, Tokyo, Japan) was given for prophylaxis 30 minutes before the procedure. The intra- and post-operative course was uncomplicated, with a reasonable operating time, minimal bleeding and no signs of infection or fever. No antibiotics were given after the operation. The wound healing was uneventful. Unfortunately, the patient reported vulvar swelling on postoperative day 12. The patient noted no pain or fever, and she was continent. Pelvic examination revealed severe edematous changes over the vulva (Fig. 1). Laboratory blood tests and C-reactive protein values were within the normal range. The patient had a history of drug allergy to antipyretics.

No bacterial culture or tissue biopsy was done because there was no open wound or vaginal discharge. After admission, metronidazole (Anegyn) was given intravenously to prevent potential infections by a wide spectrum of aerobic or anaerobic organisms. No debridement was performed during hospitalization. Fortunately, the vulva edema improved after 2 days. The edematous changes resolved completely after 5 days. After a follow-up of 3 years, she has had no recurrence of vulvar swelling and has remained continent.

DISCUSSION

The new minimally-invasive transobturator tape (TOT) procedure provides good results in short-term follow-up and high cure rates [1]. In spite of its effectiveness, synthetic mesh may also lead to erosion of the vaginal wall. The tape, which is made of small intestinal submucosa (SIS), was developed to overcome the possibility of erosion and rejection. SIS is an acellular, non-immunogenic, resorbable, xenogeneic, collagen-based biomaterial that is derived from the extracellular matrix of porcine SIS. It had been shown that SIS implantation is typically associated with tissue acceptance rather than rejection [2]. However, severe vulva edema developed in our patient within 2 weeks of the operation. She had a history of drug allergy to antipyretics.

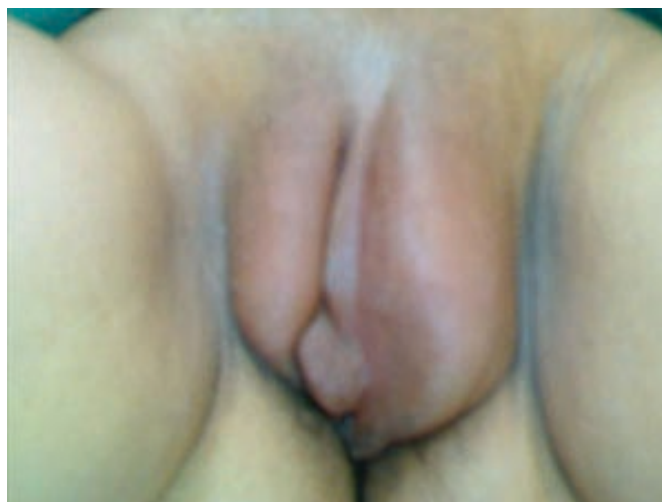


Fig. 1. Severe edema over the vulva area.

We have previously reported a case of graft-versus-host disease (GVHD) following the TOT procedure with SIS tape [3]. Characteristically, pathologic findings of GVHD include clustered lymphocytes around dyskeratotic and/or dead keratinocytes (satellite cell necrosis), with the presence of an activated donor lymphocyte recognizing a host cell. In more severe forms, clefts and spaces after necrosis of the basal cell layer result in separation of the dermoepidermal junction [4].

In this report, it was difficult to categorize this case as a rejection-like disease because of the absence of pathologic findings. Similar cutaneous reactions have been observed in women with adverse drug reactions, in pregnant women, and even in patients with cirrhosis. In summary, we must be aware of the risks and maintain a high index of suspicion in a patient with a history of any type of allergy. This underlies the need for careful evaluation of the biocompatibility of any new implantable mesh tape before it becomes available for clinical application.

REFERENCES

1. Delorme E: [Transobturator urethral suspension: Mini-invasive procedure in the treatment of stress urinary incontinence in women]. *Prog Urol* 2001; **11**:1306-1313.
2. Allman AJ, McPherson TB, Badylak SF, et al: Xenogeneic extracellular matrix grafts elicit a TH2-restricted immune response. *Transplantation* 2001; **71**:1631-1640.
3. Wang CL, Hsu CS, Long CY: Graft-versus-host disease following transobturator tape procedure with small intestinal submucosa (Surgisis): a case report. *Int Urogynecol J Pelvic Floor Dysfunct* 2009; **20**:1149-1151.
4. Aractingi S, Chosidow O: Cutaneous graft-versus-host disease. *Arch Dermatol* 1998; **134**:602-612.

Received: August 20, 2009 Accepted: September 14, 2009

Address correspondence to: Dr. Cheng-Yu Long, Department of Obstetrics and Gynecology, Kaohsiung Municipal Hsiao-Kang Hospital, 482, Shan-Ming Road, Hsiao-Kang District, Kaohsiung, Taiwan
E-mail: K83263@knhk.kmu.edu.tw