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## Clinical images

## Conventional surgery for recurrent pelvic organ prolapse with mesh erosion after failed transvaginal mesh operation



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## ARTICLE INFO

## Article history:

Received 9 October 2014

Received in revised form

26 December 2014

Accepted 23 March 2015

Available online 9 April 2015

A 71-year-old woman, G3P3 and known to have hypertension, has been referred to the urogynecology clinic at Chang Gung Memorial Hospital, Linkou branch, Taiwan complaining of protruding mass through the vagina. The patient had primary prolapse surgery 5 years earlier using transvaginal mesh (TVM) augmentation, namely Perigee (Perigee System, AMS, Minnetonka, MN, USA) with uterus preservation. One year later, she claimed she experienced vaginal bleeding, urine urgency, and a progressive bearing down sensation with protruding vaginal mass, but she did not seek medical help at that time. Five years after the surgery and due to worsening symptoms, she was referred to our clinic. After taking a detailed history, sterile speculum pelvic examination revealed > 1 cm in size mesh exposure into the vagina (Fig. 1), and a prolapse > Pelvic Organ Prolapse (POP) quantification system (POP-Q) Stage III. To assess the bothersome of the patient's symptoms, she was asked to complete self-administered questionnaires, which included: urodynamic stress incontinence 6 (UDI-6), quality of life (QOL), and incontinence impact questionnaire (IIQ-7). As a part of the standard protocol in the hospital, a multichannel urodynamic

study was done which showed stress incontinence during a urethral pressure flow study and a 1 hour pad test of 0.3 g. Outpatient flexible cystoscopy confirmed the integrity of the bladder and that no perforation of mesh occurred. After counseling the patient and her relatives regarding the need for operational intervention for such a combined problem and the available surgical treatment options, informed consent was obtained for removal of the entire protrusion of the mesh to manage the erosion (Fig. 2), followed by vaginal hysterectomy and unilateral right sided sacrospinous fixation to correct the recurrent prolapse (Fig. 3).

One month follow up after the surgery, a marked improvement in the overall score of the patient's questionnaires was found and < POP-Q Stage I prolapse during pelvic exam was noticed.

Mesh exposure and recurrent POP are common complications after TVM procedures, with literature reporting a range of rates of 0–33% for mesh erosion,<sup>1</sup> and up to 29% as a rate for recurrent anatomical prolapse.<sup>2</sup> Concomitant hysterectomy with TVM was found to increase the risk of mesh erosion,<sup>3</sup> but on the contrary, Lo<sup>4</sup> found that there was no increase in the risk of mesh erosion in patients with concomitant hysterectomy when compared to those who had a history of previous hysterectomy. Uterine preservation with a TVM procedure to manage advanced POP was found to increase the risk of mesh failure and recurrent prolapse.<sup>2</sup>

In this case, the patient presented with simultaneous mesh erosion and recurrent POP after primary TVM with uterine preservation, which was managed by excision of the exposed mesh and by conventional prolapse surgery. Despite being scarcely reported in the literature, other surgical solutions to manage recurrent prolapse after TVM procedure include abdominal sacrocolpopexy; although a high success rate was reported, it is associated with higher morbidity.<sup>5,6</sup> Also, the need for concomitant vaginal interference in cases of sacrocolpopexy, whether abdominal or laparoscopic, to manage other compartments prolapse or to excise the vaginally exposed mesh, makes the transvaginal approach in these

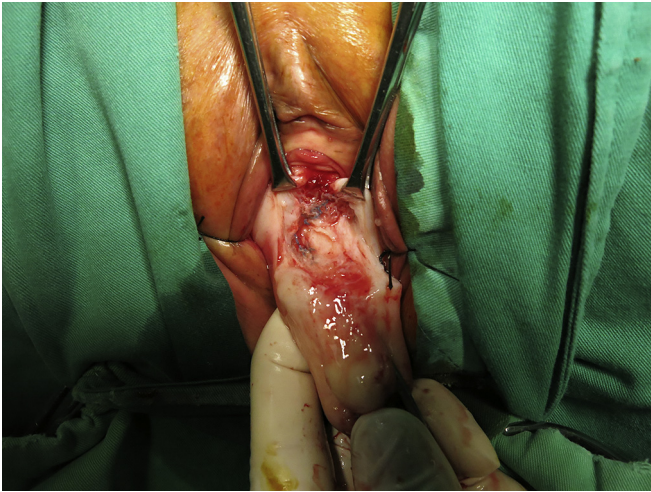
Conflicts of interest: The authors declare no conflicts of interest.

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<http://dx.doi.org/10.1016/j.gmit.2015.04.001>

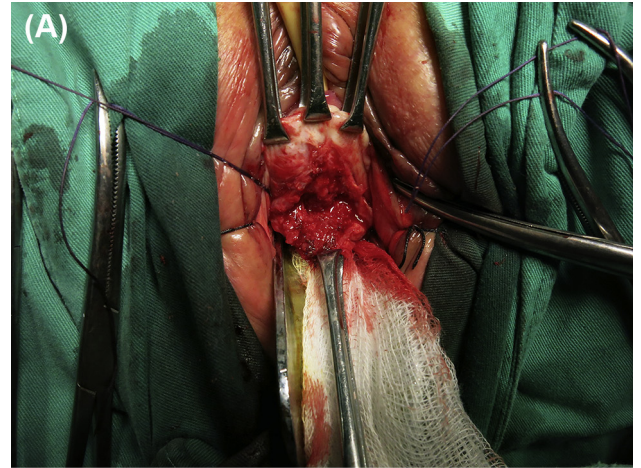
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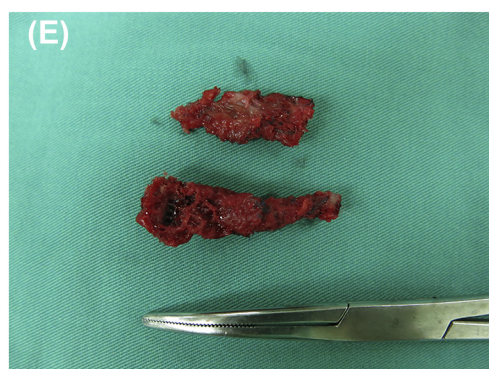
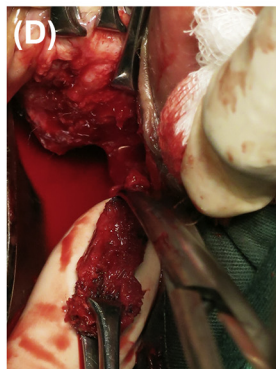
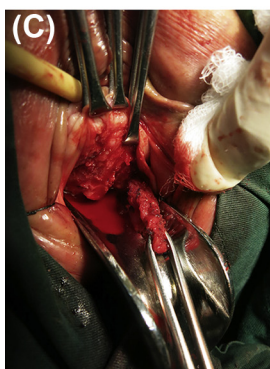
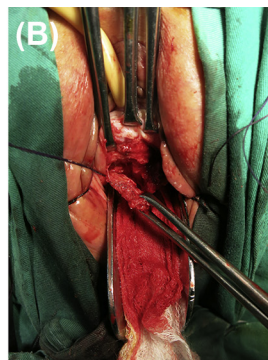
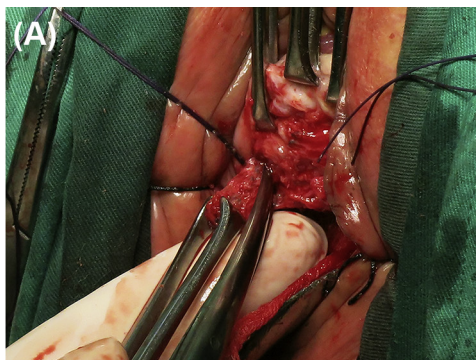
**Fig. 1.** Exposed mesh and the recurrent prolapse.

cases more applicable; however taking into consideration the possible development of fibrotic and scarred tissue after previously failed vaginal tissue repair, this will cause difficulty in dealing with the tissue.

In conclusion, surgical repair of recurrent POP after TVM surgery is challenging as an inappropriate correction for one weakened area may lead to recurrence, and conventional transvaginal POP surgery is an available option for managing these cases, especially if accompanied by mesh erosion.



**Fig. 3.** (A) After removal of the exposed mesh and before closure of anterior vaginal wall; (B) correction of the prolapse.



**Fig. 2.** (A–D) Excising procedure of the exposed mesh; (E) the excised mesh.



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