

SMALL INTESTINAL SUBMUCOSA (SIS) MATERIAL IN FEMALE URETHRAL SURGERY

Hypothesis / aims of study

Urethral diverticulum can affect up to 6% of women and can reach 40% amongst women with persistent urinary symptoms [1]. Complex urethral diverticula are rare but the defect from surgical repair may require the support of local nearby tissue, traditionally martius flap. However, this is associated with 19% post-operative bleeding and 17% long-term cosmetic dissatisfaction [2].

Trials showed that porcine small intestinal submucosa (SIS) does not shrink or contract and showed promising results in male urethral surgery [3]. We report our experience in using this in female urethral diverticulum surgery.

Study design, materials and methods

Diagnosis confirmed by MRI scan (image 1 and 2). Appropriate written consent obtained. Under general anaesthesia; cystoscopy is first performed to identify the urethral punctum. One case needed bilateral ureteric stenting due to proximity of punctum to bladder neck. Urethral catheter inserted in both cases. Via an anterior vaginal elliptical incision, the diverticulum mobilised, dissected and removed and the urethral connection closed, pubocervical fascia then interposed and remaining defect filled with SIS graft (soaked for 20 minutes in normal saline) and fixed with absorbable sutures followed by skin closure. Vaginal pack placed overnight and catheter removed 3 weeks later after peri-catheter urethrogram.

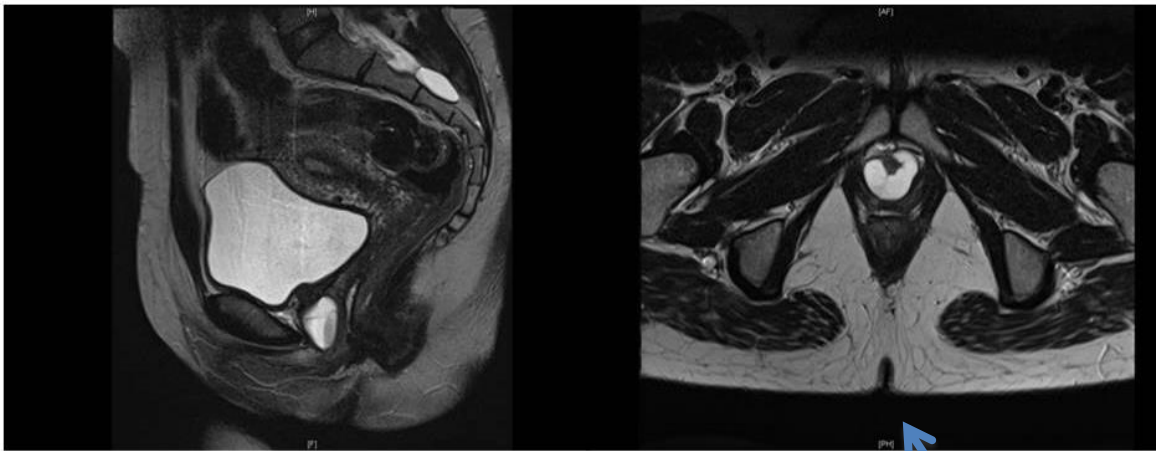


Image 1: MRI images for Patient (A) with large horseshoe urethral diverticulum

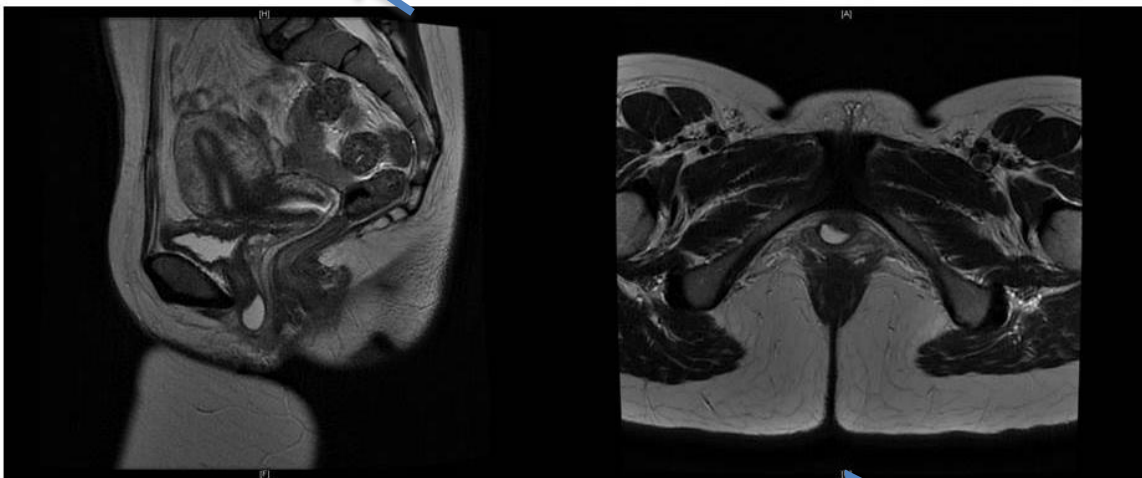


Image 2: MRI images for Patient (B) showing large posterior urethral diverticulum

Results

Both cases had follow up at 6, 12 and 26 weeks. The vaginal wound healed completely and both patients not reporting any stress incontinence, discomfort or cosmetic concern.

Interpretation of results

The use of SIS material seems beneficial for female diverticulum surgery and avoids the complications of local flap.

Concluding message

SIS graft can be used in female diverticular surgery with good surgical and cosmetic outcomes.

References

1. Stewart M, Bretland PM, Stidolph NE. Urethral diverticula in the adult female. Br J Urol 1981;53:353–9.
2. Kasyan G, Tupikina N, Pushkar D. Use of Martius flap in the complex female urethral surgery. Cent European J Urol. 2014;67(2):202-7
3. Fiala R, Vidlar A, Vrtal R, Belej K, Student V. Porcine small intestinal submucosa graft for repair of anterior urethral strictures. Eur Urol. 2007 Jun;51(6):1702-8

Disclosures

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