Poster # 386

NHS
University College London Hospitals
NHS Foundation Trust

uclh

The autologous rectus fascia sheath sacrocolpopexy and sacrohysteropexy: a mesh free alternative for recurrent vault and uterine prolapse in patients with complex pelvic floor dysfunction

Prodromos Ouzounoglou, Jai Seth, Bogdan Toia, Hazel Ecclestone, Mahreen Pakzad, Rizwan Hamid, Tamsin Greenwell, Jeremy Ockrim

Female, Functional and Restorative Urology team, University College Hospital at Westmoreland Street, 16-18 Westmoreland St, London W1G 8PH, UK

Introduction

Forty percent of women develop a degree of pelvic organ prolapse (POP) during their lifetime, and the life risk of requiring surgical repair is 11%.(1) The current standard intervention for vault prolapse is a mesh colposacropexy or hysteropexy.(2) However, patients and surgeons are increasingly hesitant of the use of mesh given recent UK and FDA warnings and litigation. The use of autologous rectus fascia sheath (RFS), is increasingly being preferred in patients with stress urinary incontinence, the success rates for RFS seem to be broadly similar to those using polypropylene mesh.(3) As such, it seems sensible to offer patients autologous RFS sacrocolpopexy and sacrohysteropexy as a mesh free alternative for uterine and vault prolapse. We report the use of RFS as a free graft for recurrent POP in a series of patients with complex pelvic floor dysfunction.

Materials and methods

All patients had (multiple) previous gynaecological or urological surgeries, and had recurrent symptomatic POP. Patients were offered autologous RFS sacrocolpopexy or sacrohysteropexy instead of mesh. Procedures were performed through Pfannensteil access to harvest a strip of RFS 10-18 cm by 2.5 cm in length. Sacrocolpopexy and sacrohysteropexy were performed in similar fashion to their mesh alternatives. For sacrocolpopexy the RFS was reconstructed in Y configuration and secured to anterior vault and posterior wall with PDS sutures. For sacrohysteropexy the RFS was wrapped around the cervix through windows in the broad ligament. The apex of the sling was attached to the sacral promontory. In sacrocolpopexy, the sling was left tension-free, whilst sacrohysteropexy was tensioned to elevate the uterus out of the pelvis. The exposed length of RFS was extra-peritonealised where possible.

Results

- 7 patients, with mean age of 52 (33 – 64) years underwent autologous RFS POP repair (sacrocolpopexy n=4, and sacrohysteropexy n=3)
- all women had POP-Q stage 3 or more.
- the mean inpatient stay was 5.1 days (range 3 – 10), and mean follow-up is 16 (range 2 – 33) months
- all patients have had improved POP-Q (C) stage ≤ 1 and symptomatic resolution of symptoms at last follow-up
- one patient required extended antibiotic cover for a post-operative chest infection. There were no other complications reported.

	Previous Surgery	POP-Q (C) / MRI findings	Surgery performed
Patient 1	-Colposuspension, -Posterior compartment repair -Second posterior repair and Anterior compartment repair -Total abdominal hysterectomy and bilateral salpingo-ophrectomy -Mesh sacrocolpopexy	POP-Q (C) 4 MRI 5.3cm vault descent from pubococcygeal line	Autogologous RFS sacrocolpopexy & redo colposuspension Abdominoplasty
Patient 2	-Colposuspension	POP-Q (C) 4 MRI 5.0 cm vault descent from pubococcygeal line	Autologous RFS sacrocolpopexy
Patient 3	-Laparoscopic sterilization -TVT -TVT excision to restore normal voiding -Botox	POP-Q (C) 3 MRI 3.0cm vault descent from pubococcygeal line	Autologous RFS sacrocolpopexy & colposuspension Abdominoplasty
Patient 4	- TAH+BSO with right ureter injury - Right boari flap - Re-do right ureteric reimplantation - Laparoscopic right nephrectomy - Sacral nerve stimulator for voiding dysfunction	POP-Q (C) 4 MRI 5.0cm vault descent from pubococcygeal line	Autologous RFS sacrocolpopexy Take down of Boari flap, excision fo remaining ureterocele
Patient 5	-Bilateral duplex kidneys -Left nephrectomy -Left ureterocele, incised and subsequently resected -Sacrospinous fixation -Repeat vaginal prolapse surgery -CISC dependent	POP-Q (C) 3 MRI 2.5cm vault descent from pubococcygeal line Vaginal vault pulled laterally from previous surgery	Autologous RFS sacrohysteropexy & colposuspension Excision of recurrent urethrocele
Patient 6	-Lower segment Caesarean section -CVA -Decreasing benefits of intravesical Botox -End colostomy for bowel dysfunction (faecal incontinence)	POP-Q (C) 4 MRI 4.2cm vault descent from pubococcygeal line	Autologous RFS sacrohysteropexy & colposuspension
Patient 7	-Spina bifida -TVT -Complete erosion of urethra(urethral loss)	POP-Q (C) 4 MRI Greater than 5.0 cm descent from pubococcygeal line at rest	Excision of TVT Cystectomy, neobladder and Mitrofanoff Autologous Sacrohysteropexy Abdominoplasty

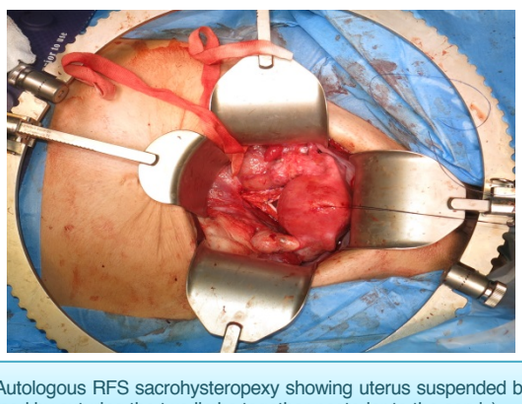

Fig1. Autologous RFS sacrohysteropexy showing uterus suspended by RFS (tightened by suturing the two limbs together posterior to the cervix)

Conclusions

Autologous fascia use as a POP graft has been reported in six series. In only two of these series was a free RFS graft employed, and only in our series was the technique of Y-shaped sacrocolpopexy and sacrohysteropexy described. In all these series, the outcomes seem equivalent to those of mesh repairs and significantly better than Pelvicol xenograft, although the follow-up is relatively short.

This is the first report of patients with recurrent, apical POP being managed with autologous RFS sacrocolpopexy and sacrohysteropexy, and only the third report of a free RFS graft being utilized with success. These three series demonstrate proof of concept for abdominal repair for POP, with safe and promising early functional results. The technique offers a mesh free approach, which could be considered for patients who are at potentially higher risk of synthetic mesh extrusion. Further study is required to identify patient suitability, durability of treatment and benefit over the standard treatment of polypropylene mesh repair.

References:

1. Swift S, Woodman P, O'Boyle A, et al: Pelvic Organ Support Study (POSST): the distribution, clinical definition, and epidemiologic condition of pelvic organ support defects. Am. J. Obstet. Gynecol. 2005; 192: 795–806.
2. Maher C, Feiner B, Baessler K, et al: Surgery for women with apical vaginal prolapse. Cochrane Database Syst. Rev. 2016; 10: CD012376.
3. Shah K, Nikolavsky D, Gilsdorf D, et al: Surgical management of lower urinary mesh perforation after mid-urethral polypropylene mesh sling: mesh excision, urinary tract reconstruction and concomitant pubovaginal sling with autologous rectus fascia. Int. Urogynecol. J. 2013; 24: 2111–2117.