

## AUTOLOGOUS FASCIAL SLING SURGERY FOR REFRACTORY STRESS URINARY INCONTINENCE

### Hypothesis / aims of study

Many surgical options are available for the treatment of female stress urinary incontinence. There is little data regarding the treatment of patients who suffer refractory stress incontinence despite previous stress incontinence surgery.

This study aims to compare the outcomes of autologous fascial sling (AFS) surgery in patients undergoing either a primary surgical procedure or surgery for refractory disease following one or more previous procedures.

### Study design, materials and methods

A single centre, single surgeon prospective review of patients undergoing autologous fascial sling (AFS) surgery for stress incontinence or mixed incontinence with a predominant stress component. Comparison was made between patients undergoing a primary procedure (n=20) and those undergoing AFS following previous stress incontinence procedures; Stamey's colposuspension, Burch colposuspension, trans-vaginal tape (TVT), trans-obturator tape (TOT) or anterior repair(n=19).

Patients were followed prospectively with pre-operative clinical evaluation, including; a clinical examination, video-urodynamic testing and questionnaire (ICIQ-UI, short form) and post-operatively with a clinical out-patient review, post void bladder scan and further questionnaire (ICIQ-UI, short form)

The primary outcome assessed was persistence of stress urinary incontinence – patient reported or elicited in questionnaire. Secondary outcomes measured were; the post-operative ICIQ-UI scores (frequency of leakage, volume of leakage and impact on quality of life), peri-operative complications, incidence of recurrent urinary tract infections, need to perform intermittent self-catheterisation (ISC) and *de novo* incontinence.

### Results

A total of 39 women underwent AFS surgery between 2011 and 2016. 20 women underwent a primary procedure and 19 women underwent AFS for refractory disease having had previous surgery. Follow-up was for a mean of 8.69 months (primary cohort mean 7.12 months, refractory cohort mean 10.36 months). All patients completed both pre-operative and post-operative ICIQ-UI questionnaires and all but one patient had video-urodynamic proven stress or mixed urinary incontinence.

Post procedure persistence of stress incontinence was 5% (1/20) in the primary group and 0% (0/19) in the refractory group. The short form ICIQ-UI assessed patients across three domains; frequency of leakage (0-5), volume of leakage (0-6) and interference with daily living (0-10). The pre-operative scores were higher in the cohort having repeat surgery as were the post-surgery scores in domains 1 and 2. The repeat surgery cohort showed lower scores in the post-operative questionnaire in domain 3 and total score. Across all domains there was an overall improvement in scores following surgery in both groups and no significant difference in the pre- and post-operative scores between groups (Table1).

The peri-operative complication rate was 20% in the primary group and 26.3% in the repeat surgery group; all complications were less than Clavien-Dindo grade 2. The recurrent urinary tract infection rate was 26.3% (5/19) in the primary surgery group and 11.1% (2/18) in the repeat surgery group. The rate of needing to perform ISC was 25% (5/20) in the primary group and 26.3% in the repeat surgery group. The rate of *de novo* urgency was 50% (2/4) in the primary group and 55.6% (5/19) in the repeat surgery group.

Table1: Pre- and post-surgery ICIQ-UI results

	All patients	Primary procedure	Repeat procedure	P value (2dp)
Pre-surgery domain score 1 (mean, range)	4.18 (2-5)	4.10 (2-5)	4.26 (3-5)	0.23
Post-surgery domain score 1	1.56 (0-5)	1.45 (0.4)	1.68 (0-5)	0.32
Pre-surgery domain score 2	4.67 (2-6)	4.30 (2-6)	5.05 (2-6)	0.09
Post-surgery domain score 2	1.90 (0-6)	1.80 (0-6)	2.00 (0-6)	0.36
Pre-surgery domain score 3	9.00 (2-10)	9.00 (2-10)	9.00 (4-10)	0.50
Post-surgery domain score 3	2.97 (0-10)	3.45 (0-10)	2.47 (0-10)	0.19
Pre-surgery total score	17.84 (6-20)	17.40 (6-20)	18 (9-20)	0.28
Post-surgery total score	6.43 (0-20)	6.7 (0-20)	6.16 (0-20)	0.39
Change in total score	11.41 (-4-21)	10.7 (-4-20)	12.16 (-11-20)	0.28

### Interpretation of results

The results suggest that autologous fascial sling following previous stress incontinence procedures does not result in worse outcomes than primary surgery with regards to the treatment of stress incontinence and patient reported outcomes and satisfaction.

The complication rate was higher with regards to peri-operative complications in the repeat surgery cohort, as was *de novo* urgency and the need to ISC. This may be a result of the increased difficulty of the surgery due to scar tissue, patient factors in the recurrent group (such as increased age), the small group sizes or the need to place more tension on the sling to prevent leakage. The need for ISC decreased with increasing follow-up and all *de novo* urgency was treated with pharmacological treatments (anti-muscarinics or beta-3 agonists) or intra-vesical botox.

### Concluding message

In patients with refractory stress incontinence following previous stress incontinence surgeries AFS surgery is an option that has good therapeutic results comparable to those of primary AFS surgery.

### Disclosures

**Funding:** NONE **Clinical Trial:** No **Subjects:** NONE