

CAN THE ANTERIOR VAGINAL WALL REPAIR SURGERY INFLUENCE THE RESULTS OF MIDDLE URETHRAL SLING? LONG-TERM RESULTS AFTER 7 YEARS FOLLOW UP.

Hypothesis / aims of study

Stress urinary incontinence (SUI) is a common pathological condition that can coexist with cystocele. Few data are available to assess if the treatment of the anterior prolapse may affect the results of the SUI surgical treatment (1). We assessed the influence of anterior vaginal wall repair in women candidate to surgery for Stress Urinary Incontinence (SUI). The results were evaluated after a very long-term follow-up.

Study design, materials and methods

We performed a retrospective analysis of a prospectively maintained database of 76 women treated for SUI.

All the MUS were retropubic (TVT) or transobturator (TVTO). Cystocele repair was obtained by anterior colporrhaphy alone (AC) or reinforced by porcine Xenograft (Pelvisoft®) (ACP) or polypropylene mesh (ACM).

- **Group 1: MUS:** TVT 39% (16/41) TVTO 61% (25/41)
- **Group 2: MUS:** TVT 54% (19/35) TVTO 46% (16/35)
 - **AC** (51% 18/35): TVT 61.1% (11/18) TVTO 39.9% (7/18)
 - **ACP** (26% 9/35): TVT 77.8% (7/9) TVTO 22.2% (2/9)
 - **ACM** (23% 8/35): TVT 22.5% (1/8) TVTO 7/8 (87.5%)

All women underwent preoperative urodynamics.

Preoperative and postoperative evaluation included: physical examination, stress test and POP-Quantification, pads/day, urinalysis, voiding diary. Subjective outcomes were evaluated with validated questionnaires and a simple question. Objective failure were: positive stress test and anterior POP stage ≥ 2 .

Chi-square or Fisher's exact test were used for statistical analysis.

Results

Mean follow-up was 90.6 ± 45.6 months. SUI recurrence rate was higher in *group 1* (24.4% vs 14.3%) with no statistical significant difference (p 0.52).

There was no statistical difference in objective results between TVT (46% 35/76) and TVTO (54% 41/76), p 0.25.

Complications included urinary retention, granuloma, pelvic pain, extrusion of the tape. Only one case of tape extrusion was documented in a TVT of group 1, this woman had a concomitant diagnosis of Papilloma Virus in the site of extrusion. No biomesh or mesh extrusion was documented in women underwent anterior POP repair.

In group 1 we had just one patient, treated with TVTO, with voiding dysfunction with early spontaneous resolution. Voiding dysfunctions in group 2 were documented in 4 patients.

In two cases (TVTO) we had an early spontaneous resolution, while in other two cases (TVT) a tape incision was performed. Follow-up results are reported in table 1.

Considering patients who had MUS plus cystocele repair (group 2) we documented a better SUI success rate in the group where a biomesh or mesh was used (100% 17/17) respect to the AC group (72.2% 13/18) with a statistical significant difference (p 0.045), as reported in table 2.

Interpretation of results

Our results show no significant influence of cystocele repair in patients treated for SUI. However, we documented a recurrence rate 10.1% higher in patients treated with the only MUS. It is possible that in a larger cohort this could become statistically significant. Another interesting finding was the difference ($p < 0.045$) of recurrence in the sub-group of patients treated by mesh/biomesh versus the fascial repair. This result could have a twofold explanation: the greater support created by a mesh/biomesh at level 2 of DeLancey, and the superior fibrosis effect that could create a pull consequence on paraurethral tissues. The association between MUS and cystocele surgery did not increase the rate of complications.

Concluding message

MUS objective results are not influenced by anterior wall repair. In case of cystocele repair the use of a bio/mesh showed better results on SUI. Patients with concomitant POP repair obtained higher subjective satisfaction.

Table 1. Follow-up results.

	Group 1 MUS	Group 2 MUS + anterior repair	P value
N. patients	41	35	
Mean follow-up, months ± s.d.	76.5 ± 33.3	107.1 ± 52.2	
Mean age, years ± s.d.	61.1 ± 10.4	65.7 ± 8.4	
VLPP* ± s.d.	87.2 ± 16.7	85.3 ± 14.9	
IUS			
Pre-operative	100%	100%	
Recurrence	24.4% (10/41)	14.3% (5/35)	0.52
OAB			
Pre-operative	61.0% (25/41)	22.9% (8/35)	
Post-operative	63.4% (26/41)	31.4% (11/35)	
Resolution	9.8% (4/25)	37.5% (3/8)	
De novo	37.5% (6/16)	22.2% (6/27)	
N. pad/day ± s.d.			
Pre-operative	2.6 ± 0.7	2.4 ± 0.6	
Post-operative	1.2 ± 0.4	1.3 ± 0.5	
Subjective success			
are you satisfied with the surgical procedure?	65.9% (27/41)	88.6% (31/35)	0.029
PPBC** – mean	1.85	1.40	
PPBC** Pts. score ≤ 2	65.9% (27/41)	88.6% (31/35)	0.029
PGI-I*** – mean	1.76	1.51	
PGI-I*** Pts. score ≤ 2	70.7% (29/41)	85.7% (30/35)	0.17
Complications	12.2% (5/41)	14.3% (5/35)	0.99

*VLPP: Valsalva Leak Point Pressure

**PPBC: Patient Perception of Bladder Condition

***PGI-I: Patient Global Impression of Improvement

Table 2: Group 2 sub-analysis.

Group 2 MUS + anterior repair	MUS + AC	MUS + AC-M/AC-P	P Value
N. patients	18	17	
IUS			
• Pre-operative	100%	100%	
• Recurrence	27.8% (5/18)	0% (0/17)	0.045
OAB			
• Pre-operative	27.8% (5/18)	17.6% (3/17)	
• Post-operative	38.9% (7/18)	23.5% (4/17)	
• Resolution	40% (2/5)	33.3% (1/3)	
• De novo	30.8% (4/13)	14.3% (2/14)	

References

1. Aust N Z J Obstet Gynaecol. 2015 Dec;55(6):593-600. doi: 10.1111/ajo.12397. Epub 2015 Aug 24. Influence of anterior vaginal mesh with concomitant mid-urethral sling surgery on stress urinary incontinence: clinical and sonographic outcome. Lo TS1,2,3, Tan YL4,5, Cortes EF4,6, Lin YH7, Wu PY1,8, Pue LB4,9.

Disclosures

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