

LONG TERM VOIDING FUNCTION FOLLOWING RETROPUBIC SLING.

Hypothesis / aims of study

The retropubic midurethral sling (RMUS) described by Ulmsten et al has become the gold standard for the treatment of Stress Urinary Incontinence since 1996. (1)

Although long term outcomes for retropubic slings have already been published (2), reviewing the literature, no data is available regarding long term urine flow parameters of women who had RMUS in the past.

Objective and subjective outcomes related to urine flow of patients who had a retropubic sling for more than five years will give us a better understanding of the impact of retropubic slings and we will be able to advice better regarding operation's long term implications.

Study design, materials and methods

Patients who had a retropubic sling inserted before August 2011 were eligible to participate in the study.

Women with chronic voiding dysfunction, neurological disease, failed retropubic sling after August 2011 but before follow up appointment and those who had non-retropubic sling were excluded.

Those who fit the inclusion criteria were contacted and asked to participate in the study. They were invited to attend for a follow up consultation.

All patients would be asked to fill in Patient Reported Outcome tools including: ICIQ UI SF, ICIQ OAB, PGIS, and W-IPSS voiding questionnaire. Those who did not want or could not attend were sent the questionnaires by mail.

At the consultation they were offered a vaginal examination to assess pelvic organ prolapse (POPQ) and to check for mesh exposure. A cough stress test would also be performed with a comfortable full bladder.

A uroflowmetry test to assess their urine flow followed and then a bladder US scan to measure post void residual.

All Data was collected on a standardized proforma including patient characteristics.

Outcomes were compared with Pearson χ^2 test for categorical data and Student *t* test or Wilcoxon rank-sum for continuous data as appropriate.

ICIQ UI SF, ICIQ OAB, PGI-I and W-IPSS voiding questionnaire were analysed using repeated measures analysis of variance ANOVA or Friedman test as appropriate.

Results

240 patients were eligible to participate. We were able to contact 84 who accepted to participate in the study. Mean age was 70 +/- 10 years old. Mean age at the time of surgery of 64 +/- 11 years old. The mean follow up was 86.6 +/- 17.6 months.

Mean parity was 2+/-1. 22 had had an hysterectomy and 10 had had previous POP surgery, 3 of them had mesh used.

10 patients had had previous incontinence surgery, 6 had a midurethral sling and 4 had a Burch colposuspension.

Median POP-Q prior to surgery was Ba -2 (-2 - 0), C -5 (-7 - 0) and Bp -2 (-2 - 0). Only 10 patients had concomitant surgery at the time.

Preoperative urodynamics confirmed SUI in all patients. Median maximal urethral closure pressure (MUCP) was 20 (14 – 27) and Median abdominal leak point pressure (ALPP) was 60 (40 – 76).

Detrusor overactivity (DO) was a urodynamic finding in 10 patients.

75 (90%) of the retropubic slings were TVT exact, 9 (10%) were Advantage fit.

There were 5 bladder perforations that were corrected intraoperatively, 2 slings required loosening in the first two weeks and 1 patient developed a retropubic haematoma that was managed conservatively.

Table 1 shows Subjectives and Objectives outcomes at follow up as well as Uroflow parameters before and after surgery.

Subjective and Objective SUI cure rates		>5 years after retropubic sling	
Reported SUI – ICIQ UI (c/e/ce)		26 (30%)	
PGI-S, Median (IQR, 25-75%)		2 (1-3)	
ICIQ UI, Median (IQR, 25-75%)		4 (3 – 10)	
ICIQ OAB, Median (IQR, 25-75%)		5 (3 – 7)	
W-IPSS, Median (IQR, 25-75%)		11 (4 – 17)	
Uroflow	Before surgery	At follow up	P value
Volume (mls) Median (IQR, 25-75%)	180 (101 – 38)	160 (107 - 275)	0.32
Qmax (mls/sec) Median (IQR, 25-75%)	23 (14 – 34)	13 (9 – 19)	0.0022
PVR (mls) Median (IQR, 25-75%)	20 (5 – 50)	57 (30 – 74)	0.0018

Interpretation of results

Retropubic midurethral slings may affect urine flow and voiding function in the long term. Maximum flow rate is significantly lower and post void residuals are significantly higher but this may not be clinically significant. Subjective and objective cure rates for SUI seem to decrease over time but patient global impression for symptoms remains high.

Concluding message

Retropubic midurethral slings may alter patients voiding parameters in the long term.

References

1. Ulmsten U, Henriksson L, Johnson P, Varhos G. An ambulatory surgical procedure under local anesthesia for treatment of female urinary incontinence. *Int Urogynecol J Pelvic Floor Dysfunct* 1996;7:81
2. Nilsson CG, Palva K, Aarnio R, Morcos E, Falconer C. Seventeen years' follow-up of the tension-free vaginal tape procedure for female stress urinary incontinence. *Int Urogynecol J*. 2013 Aug;24(8):1265-9. doi: 10.1007/s00192-013-2090-2. Epub 2013 Apr 6.

Disclosures

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