

## ARE THE NEWER SINGLE INCISION SLINGS AS EFFECTIVE AS THE RETROPUBIC MIDURETHRAL SLINGS FOR FEMALE STRESS URINARY INCONTINENCE?

### Hypothesis / aims of study

Mid urethral sling (MUS) is the preferred minimally invasive option for surgical treatment of female stress urinary incontinence (SUI). Among the various minimally invasive procedures for treatment of female stress urinary incontinence, single incision slings (SIS) offer less invasiveness with presumed less morbidity (1). This retrospective study was designed to assess if the single incision slings are equally effective as the retropubic (RP) midurethral slings.

### Study design, materials and methods

A cohort of 160 patients with a mean age of 58 years, who underwent placement of a midurethral sling between March, 2008 and December, 2009 by a single surgeon, was reviewed retrospectively. Pre-operatively, all patients filled out a incontinence questionnaire, underwent a physical exam, cough test and a complete urodynamic study. Postoperatively the patients filled out questionnaire regarding their subjective continence status and satisfaction rates. All patients had a post operative physical exam and cough test. Subjective cure rate was defined as no use of pads and objective cure rate was negative cough test and/or negative leak on post-operative urodynamics.

### Results

Total 103 women had undergone SIS (MINIARC), 51 RP (SPARC 31, BIOARC 9, LYNX 7, REPLIFORM 4) and six Transobturator Slings (MONARC). The latter group was excluded from analysis due to small number of cases. Mean leak-point pressures were similar between groups (65.9±32.7cmH<sub>2</sub>O vs. 62.1±37.7cmH<sub>2</sub>O; p>0.05); however, urethral closure pressures were significantly lower in RP group (45.1±34.1cmH<sub>2</sub>O vs. 62.6±33.3cmH<sub>2</sub>O; p=0.018 t-test). Overall 72% patients underwent additional pelvic floor repair at the time of MUS (74.1% SP & 68.5% SIS; p>0.05). Mean follow up was 22.4±24.5 weeks (median 12; maximum 120 weeks). Objective success rates (95.8% vs. 93.3%; p=0.09) and subjective satisfaction rates (96.9±6.3 vs. 94.1±19.0; p>0.05) were similar between groups. Post operative urinary retention was seen in 11 patients (10.7%) in the SIS group (range 3 to 21 days, mean 9.2), and in 8 patients (15.7%) in the RP group (range 3 to 38 days, mean 15.6). Though urethral calibration, in an attempt to loosen the sling, was done in 4 of 11 SIS patients and 4 out of 8 RP patients, no patient in this study required surgical intervention for urinary retention.

### Interpretation of results

The data suggests that there was no significant association between success rate and measures of intrinsic sphincter deficiency (leak point pressure <60cmH<sub>2</sub>O and urethral closure pressure <20cmH<sub>2</sub>O) in either groups. Satisfaction rates appear similar despite a modest increase in incidence and duration of postoperative urinary retention in the RP group.

### Concluding message

Success rates of SIS are comparable to RP midurethral sling in the short term. Success rate is not adversely affected by urodynamic evidence of intrinsic sphincter deficiency. Longer follow up studies might be helpful to assess its long term efficacy.

### References

1. Kennelly MJ, Moore R, Nguyen JN, Lukban JC, Siegel S J Urol. 2010;184:604-609

<b>Specify source of funding or grant</b>	none
<b>Is this a clinical trial?</b>	Yes
<b>Is this study registered in a public clinical trials registry?</b>	No
<b>Is this a Randomised Controlled Trial (RCT)?</b>	No
<b>What were the subjects in the study?</b>	HUMAN
<b>Was this study approved by an ethics committee?</b>	No
<b>This study did not require ethics committee approval because</b>	It was a retrospective chart review.
<b>Was the Declaration of Helsinki followed?</b>	Yes
<b>Was informed consent obtained from the patients?</b>	Yes

