

## THE IMPACT OF SURGICAL VOLUME ON POSTOPERATIVE OUTCOMES IN PATIENTS TREATED WITH SINGLE INCISION SLING: RESULTS FROM A TERTIARY REFERRAL CENTER

### Hypothesis / aims of study

Single incision sling (SIS) procedure may be considered in women with stress urinary incontinence (SUI) and is associated with high success and low complications rates. However there is still an ongoing debate between different authors in considering SIS as effective as mid urethral slings (MUSs). The reason for such discrepancy might reside in the effect of the learning-curve phenomenon. In this context, we evaluated the impact of surgical volume (SV) on postoperative outcomes in patients treated with SIS for SUI at a single tertiary referral center.

### Study design, materials and methods

Overall, 166 patients treated with primary SIS for SUI between 2007 and 2012 at a single tertiary referral center were identified. We retrospectively evaluated postoperative outcomes for the 3 most experienced surgeons in functional urology of our center. All of them had a large experience in the positioning of MUSs (more than 25 MUSs). However, their surgical volume was heterogeneous. Two surgeons placed >60 slings and 1 surgeon placed 20 slings. Importantly, at the start none of them had experience in the positioning of SISs. All patients had complete pre-operative data including age, presence of Mixed Urinary Incontinence (MUI), number of pad used. Postoperative outcomes were defined as: surgical failure (SF) (i.e. need of second surgery for persistent or recurrent incontinence), subjective cure (SC), subjective improvement (SI), and no pads usage over 24 hours (zero pad) rates. SC was defined as a negative response to the question "do you still experience any urinary leakage during activities?", while SI was considered in those women who responded yes to the question "are you satisfied with the results?". Student's t test was used to compare mean number of pad before and after SIS. Uni- and multivariate Cox regression models tested the relationship between surgical volume and the aforementioned outcomes after adjusting for possible confounders (MUI, age)

### Results

Mean follow up was 46 months (range 14-82). Mean age was 58 years (range 33-92). The rate of preoperative MUI was 37% (n=62), while the rate of pure stress incontinence was 63 (n= 104).

After treatment, the mean number of pads used was significantly lower: 3 vs 0.11 (p=0.03).

Overall SF rate after SIS was 9% (n=15) while overall SC, SI and no pads usage rates were 87.3%, 75% and 90.4% respectively. In uni- and multivariate Cox regression analyses, SV was not associated with an increased risk of SF, after adjusting for confounders (p= 0.5). Similarly, SV was not an independent predictor of SC, SI or no pad usage (all p>0.05).

### Interpretation of results

Our observations show that a small number of patients experience SF. This highlights the optimal postoperative outcomes obtained with this surgical procedure. Interestingly, SV is not an independent predictor of postoperative outcomes in patients submitted to SIS.

### Concluding message

We can hypothesize that, in a context of surgeons experienced in other procedures trained at a single referral tertiary center, patient characteristics rather than the surgical experience might significantly impact on postoperative outcomes after SISs. Of note, our results are not applicable to surgeons without experience in the treatment of SUI.

### Disclosures

**Funding:** None **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** Is a Retrospective study **Helsinki:** Yes **Informed Consent:** Yes