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SURGICAL OUTCOMES OF REPEAT MID-URETHRAL SYNTHETIC SLING AFTER FAILURE OF MID-URETHRAL SYNTHETIC SLING

Hypothesis / aims of study
Mid-urethral synthetic sling (MUS) has become the primary choice of treatment for female urinary incontinence. Consequently, the number of cases in which MUS has failed as the primary treatment is on the rise. However, studies disagree on the factors responsible for the failure of repeat MUS. This study investigated the efficacy of repeat mid-urethral synthetic sling in patients following failure of initial MUS and factors associated with its failure.

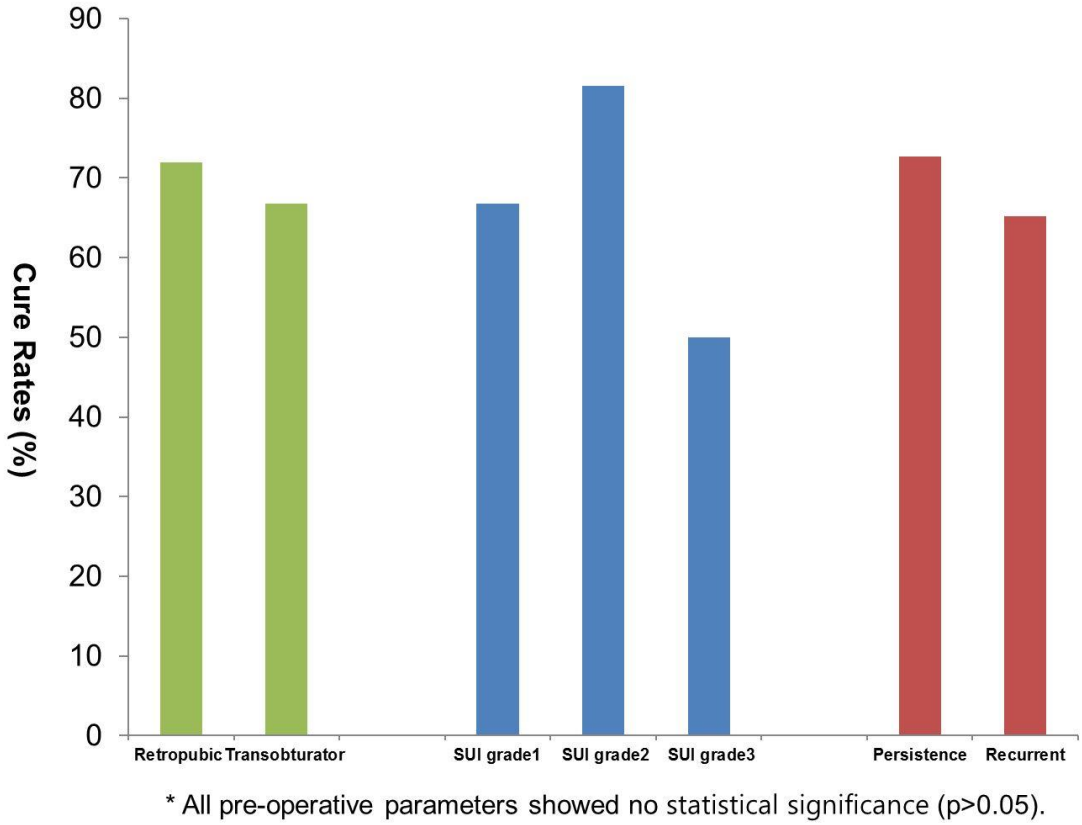
Study design, materials and methods
This study was carried out retrospectively. Sixty-seven patients underwent repeat MUS between 2005 and 2012 and, of these, 56 patients who could be follow-up more than 1 year were enrolled. Urodynamic study and voiding diary were performed preoperatively. Sandvik severity index, incontinence quality of life questionnaire (I-QOL), Bristol Female Lower Urinary Tract Symptoms Questionnaire-Short Form (BFLUTS-SF), and SEAPI were conducted pre- and post-operatively. Persistent or recurrent SUI were defined as early leakage with stress events for less than 6 weeks and later leakage more than 6 weeks after the initial success of the first MUS. Subjective cure was defined as “no” occurrence of stress urinary incontinence (SUI) during physical activity according to the Sandvik questionnaire during the preceding 7 days. All other outcomes were regarded as failure.

Results
The patients’ mean age was 55.2 ± 9.2 years. The mean follow up duration was 53.7 ± 24.9 months, and the mean duration between initial sling and repeat MUS was 31.6 ± 27.5 months. Initially, the retropubic and transobturator techniques were performed in 22 and 34 patients. After failure of the initial operation, 24 and 32 patients underwent repeat MUS using the retropubic and transobturator approaches, respectively. The cure rate of repeat MUS was 69.6% (39/56). Cure rates for retropubic and transobtulator approaches were 71.9% (23/32) and 66.7% (16/24), respectively. Cure rates of persistent or recurrent SUI after initial MUS were 72.7% (24/31) and 65.2% (15/23), respectively. The cure rate by the pre-operative grade of SUI grade was 66.7% (10/15) in Grade 1, 81.5% (22/27) in Grade 2, and 50% (7/14)) in Grade 3, but there was no statistical significance (p=0.11). The cure rate also differed according to the pre-operative abdominal leak point pressure (ALPP) (ALPP<60cmH20–66.7% (14/21), ALPP≥60cmH20-71.4% (25/35)) without statistical significance (p=0.55). All questionnaire scores improved significantly, and the maximum flow rate decreased significantly (p<0.001). Post-void residual urine volume increased; however, the increase had no significance (p=0.24). When the predictive factors for failure of repeat MUS were analyzed by multivariate analysis, grade 3 SUI was the only relevant factor (HR=4.521, 95% CI: 1.558-13.123, p=0.006). There was no significant complication associated with repeat MUS.

Interpretation of results
Until now, this study was the largest study to identify the effect and the causes or relevant factors for failure of repeat MUS after initial MUS failure. In several studies, the retropubic approach showed higher cure rate than the transobturator approach. However, the cure rate did not differ significantly between each approach in this study. Grade 3 SUI was the only relevant factor for failure of repeat MUS.

Concluding message
Although repeat MUS for failed initial MUS was shown to be effective and safe, if patients present with grade 3 SUI preoperatively, repeat MUS may be unsuccessful. Therefore, such patients should be provided with greater awareness of poorer outcome.

Figure 1. Cure rates according to the pre-operative parameters.



* All pre-operative parameters showed no statistical significance (p>0.05).

Disclosures
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