Concurrent Excision of Mid-Urethral Sling During Repeat Mid-Urethral Sling is not Associated with Continence Outcomes
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Abstract
Introduction and Objectives: The role of excision prior to a repeat mid-urethral synthetic sling for recurrent or persistent stress urinary incontinence is unknown. The purpose of our study was to evaluate if excision of a prior sling during repeat mid-urethral sling placement is associated with greater success or failure.

Methods: Retrospective chart review was performed for all women who had undergone a sling procedure at our institution between 2009 and 2013. We identified patients receiving repeat mid-urethral slings and evaluated outcomes by examining post-op symptom scores. We contacted the patients to obtain information regarding symptoms using the UDI-6 and Patient Global Impression of Improvement. Success was defined as: response of “No” to the question regarding stress incontinence on UDI-6 and response of “very much better” or “much better” on PGII. Failure was defined as response of leakage on UDI-6 question on stress incontinence, or the need for further anti-incontinence surgery. Mean values are reported and were analyzed using the two-sample T-test and Fisher’s test.

Results: 30 women with prior mid-urethral sling underwent a repeat mid-urethral sling for primary failure or recurrence. 19 women were able to provide prospective telephone data. Of these women, 7 had the initial sling excised before replacement, and 12 had the original sling left in place. There was no improvement in success for women who had their sling excised compared to women who had their sling left in place (42.86% vs 55.56%, p=0.6499). Statistical power was 9.7%. Women whose slings were excised had higher BMI (27.8 vs 32.2, p=0.0735) and higher capacity on pre-op UDS (398.25 vs 335.4, p=0.0736). Women whose slings were excised had higher ages (69.1 years vs 63.1 years, p=0.2062), and lower total scores on the pre-op UDI-6 (8.2 vs 10.5, p=0.3732). These women also had lower leak point pressure at capacity (42.3 vs 67.8, p=0.1789), and lower incidence of urethral hypermobility (14.26% vs 8.5%, p=0.3156). Finally, women whose slings were excised had longer length of follow up (8.5 months vs 3.2 months, p=0.0815), however none of these were statistically significant.

Conclusions: Excision was not associated with success in women who underwent a repeat mid-urethral sling.

Introduction
• Mid-urethral slings are considered the gold standard treatment for stress urinary incontinence (SUI)
• However, 5-20% of women still experience recurrent or persistent SUI after slings
• Prior studies have shown that a repeat sling placement after initial sling failure can lead to improved continence, even if success may not be as high as with primary sling placement [1, 2].
• It has also demonstrated that repeat success is higher with the retropubic approach compared to transobturator approach [3].
• The role of concurrent excision prior to placement of a repeat mid-urethral synthetic sling for recurrent or persistent stress urinary incontinence is currently unknown

Objectives
• The purpose of our study was to evaluate if excision of a failed prior synthetic mid-urethral sling during repeat mid-urethral sling placement is associated with greater success or failure.

Methods
• A retrospective chart review was performed of all patients who had undergone a synthetic mid-urethral sling procedure at our institution between 2009 and 2013.
• The institutional ethics review board provided approval for this study.
• Inclusion criteria: Women >18 year old who underwent a repeat synthetic mid-urethral sling for recurrent or persistent stress urinary incontinence
• Any type of mid-urethral sling will be allowed for the first procedure including single incision mini-slings
• Demographic and baseline characteristics examined were: age, BMI, previous abdominal/pelvic surgery or hysterectomy, initial synthetic mid-urethral sling surgery with route of sling placement and concomitant urodynamics and cystoscopy were performed routinely as part of a workup for sling failure patients to rule out detrusor overactivity and sling extrusion prior to surgery
• Definition of outcomes:
  • Success was defined as: response of “No” to the question regarding stress incontinence on UDI-6 and response of “very much better” or “much better” on PGII.
  • Failure was defined as response of leakage on UDI-6 question on stress incontinence, or the need for further anti-incontinence surgery.

Results
Table 1. Demographics of women who underwent a repeat mid-urethral sling, with and without sling excision
<table>
<thead>
<tr>
<th></th>
<th>Sling Excision</th>
<th>No Sling Excision</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age at surgery (years)</td>
<td>69.14</td>
<td>63.13</td>
<td>0.2062</td>
</tr>
<tr>
<td>BMI</td>
<td>27.81</td>
<td>32.67</td>
<td>0.0735</td>
</tr>
<tr>
<td>Pre-OP UDI 6 Total</td>
<td>8.17</td>
<td>10.50</td>
<td>0.3732</td>
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<tr>
<td>Capacity (ml)</td>
<td>398.25</td>
<td>335.44</td>
<td>0.0736</td>
</tr>
<tr>
<td>LPP at capacity (cm H2O)</td>
<td>42.33</td>
<td>67.75</td>
<td>0.1789</td>
</tr>
<tr>
<td>Urethral hypermobility (%)</td>
<td>14.29</td>
<td>45.45</td>
<td>0.3156</td>
</tr>
<tr>
<td>F pads post-op</td>
<td>0.43</td>
<td>0.18</td>
<td>0.2923</td>
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<tr>
<td>Length of follow up (months)</td>
<td>8.50</td>
<td>3.16</td>
<td>0.0815</td>
</tr>
</tbody>
</table>

Conclusions
• Excision of a failed prior synthetic mid-urethral sling was not associated with improved success in women who underwent a repeat mid-urethral sling placement.

References

Appendix: Demographic and baseline characteristics of women who underwent a repeat mid-urethral sling.