TREATMENT OUTCOMES OF VAGINAL MESH COMPLICATIONS

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Disclosures

• Romich Biotechnology - consultant

• Cook Myosite - investigator

• Actavis, Bayer - speaker
• Midurethral slings

• Vaginal mesh for POP

• Sacrocolpopexy
Midurethral slings

53 y. TVT for SUI.

- Unable to void
- Discharged with transurethral Foley
- Office follow up Day 2. Bladder filled with 300ml, voided 30ml.
- CISC
- Re-evaluated at Day 7. Unable to void.
- Satisfactory voiding. Treated for UTI.
- Was continent at 3 months with low residual volume.

- 61 women (61/1501; 4.1%)
- LSM to tape distance < 3mm, RV >100ml
- Median of 2.0 days – 83.6% normal voiding
- 10 had second release at median of 6 days
- No significant surgical problems
- Normal voiding restored in 96.7%
- 95.1% continent at 6 months
- What is ideal window < 2 weeks?
60 y. TVT for SUI 8 months previously.

- Urinary urgency/frequency
- UTI’s
- No pre-op evaluation (RV)
- Clinical examination normal
- UDS and cystoscopy performed
- Voided volume 120ml. RV = 150ml
- Max urine flow rate = 6ml/sec
- Filling cystometry – normal
- Voiding cystometry – suggestive of outlet obstruction
- Cystoscopy – urethra normal, bladder normal
• OR – tape divided on left side

• No change

• OR – vaginal portion of tape excised with urethralysis

• Voiding improved but recurrent SUI

• Repeat UDS – normal voiding with SUI

• Open Burch
Voiding dysfunction – treatment outcomes

- Early mobilization of MUS

- Division versus excision of vaginal portion of MUS

- Recurrence of SUI (> 20%)
42 y. TVT(O) and cystocele repair

- 3 week post-op visit – normal
- 8 week post-op visit – normal
- 12 weeks called office – hispareunia
- Mesh erosion noted in left sulci
- Trimmed in office – no change
• OR – dissection to create healthy epithelial flaps

• Excision of mesh within this area

• Primary closure

• Problem resolved with continence
MUS mesh exposure - treatment outcomes


- Office trimming – rarely sufficient

- Excision and closure

48 y. Midurethral sling (transobturator)

- Severe pain left groin and thigh
- Could not walk – weak adduction left leg
- Admitted for observation and analgesia
- No resolution
- OR – MUS completely removed Day 1
- Symptoms resolved
56 y. MUS (transobturator) – 6 months previously

• Persistent right sided groin and thigh pain, no motor problems

• Physiotherapy x 6 months – mild improvement

• OR – vaginal excision of MUS from urethra to right obturator membrane

• Pain resolved but recurrence of SUI
MUS pain – treatment outcomes

- Early intervention optimal
- Physiotherapy – muscle spasm usually present
- Excision of the vaginal portion of the mesh
- Complete excision of suprapubic MUS?
- Recurrence of SUI

- Relief of chronic pain is very difficult. Pain free status achieved in 81% (Hou et al. Outcome of Transvaginal Mesh and Tape Removed for Pain Only. The Journal of Urology. Vol. 192, 856-860, September 2014)
48 year. Suprapubic MUS 18 months previously

- Urinary urgency/frequency
- UTI’s
- Episodes of hematuria
- Suprapubic pain
- Cystoscopy – intra-vesical mesh and large calculi at 2 o’clock position
• Transurethral resection with holmium laser

• Recurrent symptoms – treatment repeated

• No resolution

• Low transverse incision, retropubic approach

• Cystotomy and mesh excision on left side

• Symptoms resolved

• Mixed urinary incontinence
Holmium laser excision for urinary mesh erosion: a minimally invasive treatment with favorable long-term results

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Int Urogynecol J. June, 2015. Department of Urology, Mayo Clinic, Rochester

Table 1 Summary of individual patient outcomes following transurethral endoscopic excision using the holmium laser

<table>
<thead>
<tr>
<th>Patient</th>
<th>Age (years)</th>
<th>Procedure</th>
<th>Primary symptoms</th>
<th>Location</th>
<th>Time to onset of symptoms (months)</th>
<th>Symptom improvement</th>
<th>Symptom follow-up (months)</th>
<th>Recurrence on cystoscopy</th>
<th>Recurrent SUI</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>60</td>
<td>Suprapubic sling (unknown)</td>
<td>Urgency, weak stream</td>
<td>Urethra</td>
<td>72</td>
<td>Yes</td>
<td>42</td>
<td>Yes, asymptomatic</td>
<td>No</td>
</tr>
<tr>
<td>2</td>
<td>54</td>
<td>MMK (multiple prior procedures)</td>
<td>Urgency, frequency, stone</td>
<td>Bladder</td>
<td>149</td>
<td>Yes</td>
<td>41</td>
<td>N/A</td>
<td>Mild</td>
</tr>
<tr>
<td>3</td>
<td>54</td>
<td>Suprapubic sling (Aris)</td>
<td>Hematuria, pain, UTIs</td>
<td>Bladder</td>
<td>43</td>
<td>No (ongoing symptoms with negative cystoscopy)</td>
<td>32</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>4</td>
<td>64</td>
<td>Suprapubic sling (TVT)</td>
<td>UTIs, stone</td>
<td>Urethra</td>
<td>&gt;12</td>
<td>Yes (after second procedure)</td>
<td>32</td>
<td>Yes, repeat TEEH, then asymptomatic</td>
<td>No</td>
</tr>
<tr>
<td>5</td>
<td>53</td>
<td>Suprapubic sling (pubovaginal sling with Repliform)</td>
<td>Dysuria, urgency, frequency, weak stream</td>
<td>Urethra</td>
<td>1</td>
<td>Yes</td>
<td>28</td>
<td>No</td>
<td>Yes, repeat TVT</td>
</tr>
<tr>
<td>6</td>
<td>55</td>
<td>Suprapubic sling (unknown)</td>
<td>Dysuria, hematuria, pain</td>
<td>Bladder</td>
<td>12</td>
<td>Yes</td>
<td>26</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>7</td>
<td>71</td>
<td>TVT-O (multiple prior procedures)</td>
<td>Pain, urgency, frequency</td>
<td>Bladder</td>
<td>1</td>
<td>Yes</td>
<td>17</td>
<td>No</td>
<td>Severe</td>
</tr>
<tr>
<td>8</td>
<td>55</td>
<td>TVT-O</td>
<td>Hematuria</td>
<td>Bladder</td>
<td>1</td>
<td>Yes</td>
<td>7</td>
<td>N/A</td>
<td>No</td>
</tr>
<tr>
<td>9</td>
<td>74</td>
<td>Suprapubic sling (SPARC)</td>
<td>Retention</td>
<td>Urethra</td>
<td>99</td>
<td>Yes</td>
<td>14</td>
<td>Yes, repeat TEEH, then no recurrence</td>
<td>No</td>
</tr>
<tr>
<td>10</td>
<td>66</td>
<td>Suprapubic sling (TVT)</td>
<td>Dysuria, hematuria, pain</td>
<td>Bladder</td>
<td>9</td>
<td>No (ongoing symptoms with negative cystoscopy after second procedure)</td>
<td>6</td>
<td>Yes, repeat TEEH, then no recurrence</td>
<td>No</td>
</tr>
</tbody>
</table>

- All daycare, average surgical time 27 minutes, transurethral catheter on average 3 days
- 80% improvement of symptoms
- 30% had recurrent SUI
49 y. Total vaginal mesh repair

- Vaginal discharge/bleeding
- Pelvic pain
- Dyspareunia
- Mesh exposure anterior and posterior
- Antibiotics, vaginal estrogen
- Office trimming
• OR – anterior exposure excised and primary closure, posterior mesh excised

• Discharge and bleeding resolved

• Pelvic pain improved significantly

• Dyspareunia improved

• Stage 2 posterior vaginal prolapse

• Continued follow up and physiotherapy
Vaginal mesh for POP complications – treatment outcomes

- 43% had prior mesh removal procedures
- Concomitant procedure – hysterectomy 6%, prolapse repair 56%, continence procedure 10%
- After vaginal mesh removal, 50% (n=43) had resolution of all presenting symptoms
- Mesh exposure was treated successfully in 95% of cases
- Pain was successfully treated in 51% of women
- Significant improvement or complete resolution of pain was achieved in 64% of patients
- 30% reported persistent dyspareunia

Figure 1.
Mesh removal procedures performed in the urogynecology division at a tertiary referral center.
Figure 2.
Symptoms before and after mesh removal.
Figure 3.
Change in pain after mesh removal.
56 y.

- TVH with anterior and posterior repair

- 6 years later ASC (mersiline, ethibond), TOT

- 6 months postop – lower abdominal pain, vaginal discharge, vaginal bleeding

- Ethibond sutures and mesh trimmed in office

- Multiple courses of antibiotics

- Mesh and ethibond noted at vaginal vault, sinus on right
• OR – vaginal excision, Latzko colpocleisis

• Vaginal symptoms resolved, some pain improvement

• 6 months later recurrence of discharge, pain

• No mesh noted but recurrence of sinus tract with discharge, Stage 2 vault prolapse

• CT scan

• Laparotomy – extensive adhesiolysis, complete excision of mesh, upper vaginectomy, uterosacral ligament suspension

• 5 months – pain free

• About 40% may require multiple surgeries (Arsne et al. Sacral colpopexy: long-term mesh complications requiring reoperation(s). Int Urogynecol J (2015) 26:353–358)

• Recurrent prolapse

• Management
Changed Women: The Long-Term Impact of Vaginal Mesh Complications

Guinn Ellen Dunn,* Brooke L. Hansen, MD,* Marlene J. Egger, PhD,þ Ingrid Nygaard, MD, MS,* Ana C. Sanchez-Birkhead, APRN, PhD,þ Yvonne Hsu, MD,* and Lauren Clark, RN, PhDþ (Female Pelvic Medicine & Reconstructive Surgery & Volume 20, Number 3, May/June 2014)

Relationship of the major codes to each of the 3 trajectories and areas of experiential overlap between the trajectories.