Pubovaginal slings

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1. Urinary continence and SUI in women
2. Midurethral and Pubovaginal slings
3. Pathologies of post fistula closure urethral incontinence
4. Preoperative and intraoperative considerations of Pubovaginal ‘MUS’
1a. Clinical outcomes, post-repair UI VVF

- 95% Successfully closed
- 47-50% Cured (closed and dry)
- 17-20% With mild urethral incontinence
- 15% With severe urethral incontinence
- 7-10% With chronic retention and overflow incontinence
- 5% Failure/Break
- 1.5-2.5% Non-curable/Irreparable
1b. Continence, UB cycle, anatomic components
### 1c. Lower Urinary Tract Symptoms (LUTS)

<table>
<thead>
<tr>
<th>Major Categories</th>
<th>Subcategories</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>STORAGE DISORDERS</strong></td>
<td>(Incontinence: Urgency, Stress, Frequency, Nocturia, Enuresis)</td>
</tr>
<tr>
<td><strong>VOIDING / EMPTYING DISORDERS</strong></td>
<td>(Straining, Hesitancy, Incomplete emptying, Poor stream, Intermittency, Postmicturition dribbling)</td>
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<tr>
<td><strong>SENSATION DISORDERS</strong></td>
<td>(Urgency, Dysuria, Absent sensation, Painful bladder)</td>
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<tr>
<td><strong>DISORDERS OF BLADDER CONTENTS</strong></td>
<td>(Foreign body, Stones, Bladder tumor)</td>
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</table>
2a. Pathologies in post fistula closure urethral incontinence
2b. Pathologies in post fistula closure urethral incontinence
2c. Pathologies in post fistula closure urethral incontinence
2d. Pathologies in post fistula closure urethral incontinence
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3. Midurethral and Pubovaginal slings

- Pubovaginal sling – tissue to support urethra (mid or neck) and abdominal wall fixation point, traditionally on to the pubis symphysis or pectineal ligament
- MUS – tension free placement of mesh tape between urethra & vagina
  - TVT in 1995, TOT in 2001
  - Retropubic, transobturator, adjustable/singe incision
  - Emphasis on the midurethra, replaced the urethropexies and pubovaginal slings
- Resistance board during increased abdominal wall pressure, compression
- SUI or stress-dominant MUI
4a. Preoperative considerations (MUS for SUI)

**General**

1. Exclude other etiologies of UI
   - Complicated SUI – ‘… women who have complicated SUI may benefit from multichannel UD testing and other diagnostic tests before initiation of treatment, especially surgery …’

2. Confirm normal bladder emptying

3. Assess surgical risk

**Post fistula closure UI**

- Take time, be thorough
- History – severity, sensation, diary, motivation
- Examination
  - Vagina, urethral tissue, sphincter tone
  - VU/PVR, Valsalva (active attempt to hold urine), Bonney’s, overactivity
  - Ultrasound
  - UDS
  - Cystoscopy
<table>
<thead>
<tr>
<th>Evaluation</th>
<th>Uncomplicated</th>
<th>Complicated</th>
</tr>
</thead>
<tbody>
<tr>
<td>History*</td>
<td>Urinary incontinence associated with involuntary loss of urine on effort, physical exertion, sneezing, or coughing</td>
<td>Symptoms of urgency, incomplete emptying, incontinence associated with chronic urinary retention, functional impairment, or continuous leakage</td>
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<tr>
<td></td>
<td>Recurrent urinary tract infection</td>
<td>Recurrent urinary tract infection$^1$</td>
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<tr>
<td>No prior extensive pelvic surgery</td>
<td></td>
<td>Previous extensive or radical pelvic surgery (eg, radical hysterectomy)</td>
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<tr>
<td>No prior surgery for stress incontinence</td>
<td></td>
<td>Prior anti-incontinence surgery or complex urethral surgery (eg, urethral diverticulectomy or urethrovaginal fistula repair)</td>
</tr>
<tr>
<td>Absence of voiding symptoms</td>
<td></td>
<td>Presence of voiding symptoms: hesitancy, slow stream, intermittency, straining to void, spraying of urinary stream, feeling of incomplete voiding, need to immediately revoid, postmicturition leakage, position-dependent micturition, and dysuria</td>
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<tr>
<td>Absence of medical conditions that can affect lower urinary tract function</td>
<td></td>
<td>Presence of neurologic disease, poorly controlled diabetes mellitus, or dementia</td>
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<tr>
<td>Physical examination</td>
<td>Absence of vaginal bulge beyond the hymen on examination</td>
<td>Symptoms of vaginal bulge or known pelvic organ prolapse beyond the hymen confirmed by physical examination, presence of genitourinary fistula, or urethral diverticulum</td>
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<tr>
<td></td>
<td>Absence of urethral abnormality</td>
<td></td>
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<tr>
<td>Urethral mobility assessment</td>
<td>Presence of urethral mobility</td>
<td>Absence of urethral mobility</td>
</tr>
<tr>
<td>Postvoid residual urine volume</td>
<td>Less than 150 mL</td>
<td>Greater than or equal to 150 mL</td>
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<tr>
<td>Urinalysis/urine culture</td>
<td>Negative result for urinary tract infection or hematuria</td>
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4b. Intraoperative considerations

- Regional anesthesia
  - Urinary stress test – LA, sedation
- Instruments – foley, cystoscope
- Mark abdominal exit points
- Midurethral vaginal incision
- Bladder deviation, ‘slide’ over pubis
- Cystourethroscopy (up to 40% missed)
- Tension free placement, ? Obstruct
5. Multidisciplinary approach

- Cure vs expectation of outcome
- Patient reported outcomes – Quality of life (QoL), multidimensional ‘domains’
  - Emotional/social - relationships with family and friends, intimacy, and sexuality
  - Functional – role performance, daily activities
  - mental/psychologic – emotional distress, sense of wellbeing and health
  - Physical – symptoms, side effects of treatment
  - Additional – disease specific, health provider/team relationship
- Physical therapy
Summary

• Post fistula closure UI needs a team approach to improve patient QoL with no promise of ‘complete cure’

• PVS procedures are reasonable alternative procedures for post fistula closure SUI for selected women

• PVS procedures are better offered for women with post fistula closure UI after optimal preoperative evaluation to confirm predominant SUI