Outcomes of Men Undergoing Glanulopexy for Managing SST Deformity with Penile Prostheses

Matthew Ziegelmann*, Landon Trost

Mayo Clinic
Department of Urology
Rochester, MN

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Introduction

• Supersonic transporter deformity (SST)
  • Cylinder size
  • Scarred distal corpora
  • Glanular hypermobility (GH)

• Treatment options
  • Cylinder upsizing
  • Corporal scar excision
  • VED, MUSE
  • Glanulopexy
Introduction

• Techniques for glanulopexy

  • Ball, Urology 1980
    • Descriptive case report

  • Stefani et al, J Urol 1994
    • Description and case series (n=9)

  • Hirsch and Moy, Tech Urol 2000
    • Descriptive case report

  • Mulhall and Kim, Urology 2001
    • Description and case series (n=10)
Objectives

- Describe our modified glanulopexy technique for glanular hypermobility (GH) or supersonic transporter (SST) deformity associated with penile prosthesis (PP) placement
Methods

- Single surgeon series (LT)
- Prospectively maintained database
  - January 2014 – October 2016
  - 15 patients underwent modified version of glanulopexy technique

- Outcomes
  - Functional position of the glans on physical exam
  - Changes in glans sensation
  - Device revision or removal (infection, malfunction, dissatisfaction)
Technique
Technique

- Bilateral longitudinal distal skin incisions
Technique

- Dissect skin and Dartos proximally and distally to Buck’s fascia
Technique

- Bilateral 2-0 Ethibond anchor stitches placed in the corporal bodies proximal to incision
Technique

- 3rd Ethibond (UR-needle) passed through glans penis from one incision to the other
Technique

- Glanular suture is secured to anchoring stitches after appropriately tensioning the glans penis to obtain the desired cosmetic and functional result.
Technique – Final result
Technique

- Notable modifications during learning phase:
  - **Permanent suture (Ethibond)** now used in all cases
    - 60% of glanulopexy procedures performed with Vicryl suture resulted in recurrent GH/SST
  - We now utilize **UR needle** without perforation of glanular skin
    - Initially: Keith needle used to pass glans suture through the glans penis via two additional small glanular incisions
    - Single patient developed infection directly attributable to the suture itself
Technique

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# Patient demographics

<table>
<thead>
<tr>
<th>Penile Prosthesis, n (%)</th>
<th>(N=15)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Primary</td>
<td>8 (53)</td>
</tr>
<tr>
<td>Revision</td>
<td>7 (47)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Glanulopexy Details, n (%)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Same procedure</td>
<td>11 (73)</td>
</tr>
<tr>
<td>Subsequent procedure</td>
<td>4 (27)</td>
</tr>
<tr>
<td>Vicryl suture</td>
<td>5 (33)</td>
</tr>
<tr>
<td>Ethibond suture</td>
<td>10 (66)</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Follow-up (mo)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Median (range)</td>
<td>13 (1-22)</td>
</tr>
</tbody>
</table>
## Outcomes

### Recurrence of Deformity, n (%)

<table>
<thead>
<tr>
<th>Thread</th>
<th>Rate</th>
<th>Value (%):</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vicryl (2-0)</td>
<td></td>
<td>3 (60)</td>
</tr>
<tr>
<td>Ethibond (2-0)</td>
<td></td>
<td>0 (0)</td>
</tr>
</tbody>
</table>

### Complications, n (%)

<table>
<thead>
<tr>
<th>Problem</th>
<th>Rate</th>
<th>Value (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Device removal</td>
<td></td>
<td>5 (33)</td>
</tr>
<tr>
<td>Infection*</td>
<td></td>
<td>3 (20)</td>
</tr>
<tr>
<td>Dissatisfaction**</td>
<td></td>
<td>2 (13)</td>
</tr>
<tr>
<td>Changes in glans sensation</td>
<td></td>
<td>0 (0)</td>
</tr>
</tbody>
</table>

* One infection directly attributable to glans stitch

** Dissatisfied with IPP overall with no relation to glanulopexy
Limitations

• Case series
  • Small patient cohort

• Lack of control group

• Single surgeon

• Single (modified) technique
Conclusion

- Glanulopexy using a minimally invasive technique w/ permanent suture successfully corrects severe SST/GH without reducing penile sensation

- The current technique is fast and durable, with high patient satisfaction

- Further long-term studies are required to evaluate differences in outcomes including infection and patient dissatisfaction
Thank you