One sided Tight Pubo vaginal Sling for Women with ongoing urinary incontinence post VVF repair

Sunday Lengmang
5th February 2024
Evolution of the one sided tight PV Sling - Near Extinction of Urinary Diversion
Near Extinction of Urinary Diversion: Evolution of the one sided tight Pubo vaginal Sling

- Post closure urinary incontinence (PCUI)
  - nightmare
  - main reason for persistent urinary incontinence among women who had successful closure of urinary fistula
  - Main indication for urinary diversion
- There are many procedures employed to solve PCUI
PCUI procedures (My experience)

1) Cystourethropexy
2) PV sling with cadervetic graft
3) PV sling with semi-synthetic graft
4) PV sling with rectus abdominal fascia
5) PV sling with fascia Lata
6) PV Sling with Pubo-cervical fascia
PCUI procedures (My experience)

7) Urethralization
8) Urethral plug
9) Injection of bulking agents (tegress)
10) Tight PV sling using fascia Lata
11) Tight PV Sling using Pubo-cervical fascia
12) One sided tight PV sling using Pubo-cervical fascia
PCUI: Evolution of one sided tight PV sling

- Severe fibrosis makes dissection very difficult
- Sometimes dissection is only possible on one side.
- Peri-urethral bulking surgery stands out.
  - Immediately effective.
  - Unfortunately, 50% leak within 3 months; 80% leak within 6 months
- Valuable lessons:
  - Procedure that acts circumferentially is likely to be effective.
  - There need to be compression of a column of the urethra
  - None absorbable bulking agents will work best.
PCUI: Evolution of one sided tight PV sling: Lessons from urethral injuries / Symphyseal separation

- Continence is not affected by a shift of the urethra to one side
- Shifting the urethra to one side might actually improve continence
- ...Could tight PV sling be done where dissection is only possible on one side (which often is the case in bad cases).
PCUI: Evolution of one sided tight PV sling: Lessons from gardening / Playground

- Water horse
- Drip irrigation
- Balloon
PCUI: Evolution of one sided tight PV sling: Lessons from gardening and playground

- Narrowing the urethra
- Column of narrowed tube
- Sling effect
- Could be drawn to one side
PCUI: Summary of lessons leading to one sided tight PV sling

- Severe fibrosis often restricts dissection to one side
- Presence of persistent fistula in some cases
- The more circumferential the procedure, the better expected outcome
- Continence might improve by a shift of the urethra to one side
Description of one sided tight PV Sling

- Infiltration of weak adrenaline solution or saline if hypertensive
- Inverted “U” shaped incision at the bladder neck
- Dissect anterior vaginal wall off pubo-cervical fascia
- Extend the dissection to paravesical spaces (sharp and blunt dissection
- Blunt dissection to the retropubic space of Retzius
- Plicate proximal urethra and bladder neck
- Stab skin 2cm above symphysis pubis
- Spread sub-cut tissues with artery clamp
Description of one sided tight PV Sling 2

- Pass finger through paravesical space pushing bladder medially
- Pierce Fascia of rectus abdominis with 15° or 30° Stamey needle lateral to your finger to ensure no bladder injury
- Guide the Stamey needle out through that paravesical space
- Load the Vicryl through the needle and pull out – up through the paravesical space, retropubic space and out of the supra-pubic stab wound
- Pierce Fascia of rectus abdominis again at least 2cm behind the first site with 15° or 30° Stamey needle lateral to your finger to ensure no bladder injury
- Guide the Stamey needle out through that paravesical space
Description of one sided tight PV Sling 3

- Load the Vicryl through the needle and pull out – up through the paravesical space, retropubic space and out of the supra-pubic stab wound
- Do a gravity dye test
  - Ensure there is no fistula
  - Access the bladder capacity
  - Test how tight the sling need to be in place
- Tie one knot
- Ask the patient to cough
- Make the knot tighter until there is no leak with cough
Description of one sided tight PV Sling 4

- Tie more knots
- Close the abdominal skin wound
- Close the anterior vaginal wall
Result

- From 2020 to 2023
- Experience with close to 200 patients in Nigeria (Jos and 6 other states), Cote d'Ivoire
- We have data for about 109 in Jos, Nigeria
- We excluded 16 cases that were not done on non-fistula patients (SUI)
- Left with 93 patients
# Results

## Descriptive Statistics

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<th>N</th>
<th>Minimum</th>
<th>Maximum</th>
<th>Mean</th>
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Complications

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### Outcome at Discharge

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<th>Frequency</th>
<th>Percent</th>
<th>Cumulative Percent</th>
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<td>No improvement</td>
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<tr>
<td>Total</td>
<td>93</td>
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Outcome at Discharge

- Increases to **86.3%** if exclude those with obvious fistula
## 3 mo FU

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# 6 mo FU

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<td></td>
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One sided tight PV Sling

- Closest to bulking agents
- Acts by affecting most of the urethral circumference
- Acts on the serosal rather than the mucosal part of the urethra
- Is made tight enough to keep urine in the bladder
- Creates an angle that keeps the urine in
- Creates at least 1cm column of tight closure of urethra
- Could shift the urethra away from the midline
- Fibrosis keeps the urethra in place
One sided tight PV Sling: Advantages

- Could be done when only one paravesical space can be accessed (dissected)
- Could be done concurrently with small residual fistula repair
- Offers best outcome with success rate of about 80%
- We are now fixing cases that were deemed inoperable for decades
- This has significantly dropped need for urinary diversion
- Zero urinary diversion in 4 years
Thank you!