Surgical Management of Stress Urinary Incontinence in Men

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May 1, 2019
Objectives

1. Evaluation on incontinence in men
   - Which is it?

2. Surgical options
   - Artificial urinary sphincter
   - Slings

3. Special considerations in the elderly
Dear doctor

Please see this 81 yo man with urinary incontinence. He leaks “all the time” and has to rush to the bathroom. He has a constant rash in his groin. His daughters think he should consider moving into assisted living because of the leakage. His wife is struggling with cleaning his clothes.

Is there anything you can do?

Is he too old for surgery?
Mr. Solomon Gundy

Interview him and his wife/family – assess LUTS

Storage
- F – q2-3 hr
- N - 2-3x
- Urgency – mod
- Mixed incontinence
  - Urgency UI –1-2x daily
  - Stress UI is worse

Voiding
- “good” stream
- empties well
- post void dribble

Pad usage
- 3 “depends” in day
- 1 at night
Characterize the Incontinence

Urgency Urinary Incontinence
- Involuntary loss of urine preceded by or associated with the feeling of urgency

Stress Urinary Incontinence
- Involuntary loss of urine associated with cough, sneeze, or exertion
Other causes

- Overflow
  - Associated with urinary retention

- Others:
  - Nocturnal enuresis
    - Occurring during sleep
  - Other types
    - Post void dribble
Assess contributing factors in Mr SG

PMH
- DM, HTN, OA, Radical Prostatectomy 12 yrs ago, no radiation

MEDS
- ASA 81 mg
- Ramipril 7.5 mg
- Hydrochlorothiazide 25 mg
- Metformin 500 mg TID
- Fesoterodine 8mg OD
Social

- lives with wife
- drives his car
- does ADLs
- gets help with meals.

Examination

- BMI 28
- Abd – soft, bladder not palpable
- Scrotum – dermatitis from urine, candidiasis
**Storage LUTS following Radical Prostatectomy**

- **De novo detrusor overactivity:** 2-63%
  - Generally reported as 20-30%

- **Urgency Urinary Incontinence:** 6-10%

- **Detrusor Underactivity:** 29-61%
  - (25% at 3 yr)

Stress Urinary Incontinence

Post prostatectomy incontinence:

- Open RRP: 7-40%
- Lap RRP: 5-34%
- Robotic RRP: 4-31%

Quantifying Incontinence

- Degree of leakage
  - pad test – rarely used
  - leak in supine?
  - leak with minimal exertion?
  - number/type of pads
- MILD vs MODERATE vs SEVERE
  - (1-2)
  - (3-4)
  - (5+)
Special “extra” considerations

- Does he have a “good” flow, and does he empty?
- Radiation?
- Recurrent UTIs?
- Cognitive status?
- How is his manual dexterity?
- Belly size?
- degree of bother
Surgical Treatment Options

- Artificial Urinary Sphincter (AUS)
- Slings
  - Fixed slings
  - Adjustable slings
- Bulking agents
  - not recommended
Botox in older men

- effective in treating refractory OAB in healthy older men
- treatment success lower in frail older men
- urinary retention more likely in older men
  - 11.5% vs 6.3% \(^1\)

1. Artificial Urinary Sphincter “Gold Standard”

- Mod/severe: >3 ppd
- With or without radiation
- Not earlier than 6 mo post op
- Open bladder neck
- Adequate manual dexterity and cognitive function

(Grade A recommendation)

Report of the 2015 Consensus Conference
Biardeau et al. Neuro Urodynam. 2016. 35:S8-S24
Results of AUS

Radiated Patients

- 0-1 pad/day: 80%
- Satisfactions rate: 87-90%
- Revision rate: 22-55% at 5 years
- Erosion rate: 5-10%

- High satisfaction rate!

Contraindications of AUS

- cognitive dysfunction
- recurrent UTI
- recurrent bladder cancer
- need for regular cystoscopy
- poor manual dexterity
- poorly compliant(stiff) bladder
1. Fixed Transobturator Sling

- AdVance<sup>TM</sup> – 2006
- Advance XP<sup>TM</sup> – 2010

(Boston Scientific, USA)
Retro-urethral Sling: Advance XP

Unradiated Success:
- Dry/cure rates: 50-75%
- Improved: 20-30

- 1 ppd - >90%
- 2-3 ppd - 75%
- > 3 ppd - 50%

- diminished efficacy over time
- Radiation therapy – predictor of failure

Sahai et al., Neurouroil Urodyn 2017; 36:927-934
2. Adjustable Slings

ATOMS® Sling (AMI, Austria)

- Transobturator suburethral
- Adjustable cushion, via implantable titanium port
- Adjustable in clinic
THE EARLY CANADIAN EXPERIENCE WITH ATOMS FOR POST-PROSTATECTOMY INCONTINENCE: A MULTICENTRE STUDY

• Trevor Haines¹, Genevieve Nadeau², Le-Mai Tu³, Julie Morisset⁴, Stephen Steele⁵, Chris Doiron⁵, Luc Valiquette⁶, Dean Elterman⁷, Conrad Maciejewski⁸, Keith Rourke¹
# RESULTS: Continence

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<tbody>
<tr>
<td>Continence Rate</td>
<td>124/155 (80.0%)</td>
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<tr>
<td>Improvement Rate (&gt;50%)</td>
<td>137/156 (87.8%)</td>
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<td>Post-operative pad usage</td>
<td></td>
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<tr>
<td>No pad / Rescue pad</td>
<td>104/155 (67.1%)</td>
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<tr>
<td>Mild (1-2 pads)</td>
<td>33 (21.3%)</td>
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<tr>
<td>Moderate (3-4 pads)</td>
<td>10 (6.4%)</td>
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<tr>
<td>Severe (5 or more pads)</td>
<td>8 (5.2%)</td>
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With permission from Keith Rourke
What surgery do I choose?

**Mild to mod** (1-3 pads), good bladder power
  1. Fixed sling
  2. Adjustable sling

**Mod to severe** (>3 pads), good bladder power, with or without rads
  1. AUS
  2. Adjustable sling (with reservation)

**Mild, mod, or severe, + detrusor underactivity**
  1. AUS
Detrusor Underactivity - DU

“contraction of reduced strength and/or duration, resulting in prolonged bladder emptying within a normal period.”

- true incidence not known (40%?)
- Avoid slings in these patients
This Case

- 3 – 4 pads/depends (mod-sev)
- SUI on history, leaks when supine
- Mild-mod OAB, occasional UUI
- Good manual dexterity

AUS is recommended
Can discuss sling as inferior alternative
Conclusions

1. Must distinguish between Urgency and Stress Urinary Incontinence

2. Good surgical options exist for men with SUI, with low morbidity.

3. The AUS remains the most predictably successful surgery in patients with moderate to severe stress incontinence
Conclusions

4. Slings are a good option with low rates of complications in patients with mild to mod SUI, who have not had radiation

5. Must consider cognition, dexterity, and other potential complicating factors in older men

6. “Overall” assessment more important than age alone