Male bulbar urethral closure for urinary incontinence in the artificial urinary sphincter era.

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Aims of study

- Bulbar urethral closure with permanent suprapubic catheterisation is an established treatment for intractable urinary incontinence in patients unsuitable or unwilling to undergo urinary diversion.
- Urethral closure has been published for treatment of neuropathic and multiple sclerosis patients.
- In our practice bulbar urethral closure is also used to manage incontinence in post prostatectomy patients with eroded artificial urinary sphincters (AUS) (see Figure 1) that are not able to have further artificial sphincters inserted.
- It was our aim to critically evaluate our series of male patients undergoing bulbar urethral closure over the last 5 years.

Method

- Our theatre database was searched for male patients undergoing bulbar urethral closure between 2006 and 2011.
- A retrospective case note analysis was undertaken to evaluate this procedure. Specific attention was paid to:
  - The indication for urethral closure
  - Complications
  - Need for further treatment

Results

- 14 patients were identified that underwent bulbar urethral closure
- The underlying reason for incontinence is displayed in the table (right of text)
- An AUS had been previously inserted into 7 patients at least once, but had either eroded or become infected
- No patient had any perioperative complications
- After a median follow up of 38 months (range 6 – 55), two patients required a repeat urethral closure for urethral leakage (both patients had a prior eroded AUS following RP)
- Both of these patients were found to have extremely high pressure uninhibited detrusor contractions on urodynamic testing (see Figure 3).
- These two patients are now maintained on anticholinergic therapy and one patient has annual intravesical botulinum toxin injection.
- All 14 patients are now dry urethrally.

Figure 2 – Urethral closure

Patient is placed in lithotomy position. A cystoscopy and insertion of suprapubic catheter is performed. A urethral catheter is placed to aid urethral mobilisation

Left – A perineal incision is made and the bulbar urethra identified and mobilised.

Right – A 2cm length of bulbar urethra is excised. Each cut end is sutured closed. When closing the wound the two ends are buried in separate fascial layers. A suction drain is used to reduce haematoma formation.

Conclusions

- Urethral closure is a low morbidity and effective procedure.
- The outcome however may be jeopardised by patients with high detrusor pressures as a result of detrusor overactivity / decreased bladder compliance.
- We recommend urodynamics prior to urethral closure to identify and appropriately manage patients with uninhibited high pressure detrusor contractions.

Figure 3

Urodynamic tracing from patient with failed bulbar urethral closure. Note loss of compliance culminating in high pressure detrusor contraction.

INDICATION

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<td>NEUROLOGICAL</td>
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References