

Longevity of Artificial Urinary Sphincters for Post Prostatectomy Incontinence

Abstract #357



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Hypothesis / Aims of study

For a patient undergoing radical prostatectomy one of their main concerns is whether they will develop urinary incontinence following their procedure.

20% of patients will have bothersome urinary incontinence at 12 months post procedure (1)

Artificial urinary sphincter (AUS) remains the standard treatment for moderate-to-severe post prostatectomy incontinence (PPI) (2)

Aim: to report updated outcomes for our cohort of men undergoing surgical treatment of PPI.

Study Design, Materials and Methods



Male patients undergoing primary AUS insertion for post prostatectomy incontinence



Primary AUS insertion between 1 January 2007 and 31 October 2022



Single tertiary referral centre in UK, AUS procedure done by one of three primary surgeons, with AMS 800™ = implanted device



Patients undergoing re-do implants with primary insertion performed at a different centre

Patients lost to follow up

Outcome Measures

PRIMARY OUTCOME MEASURES



Improvements in continence as measured by pads per day (ppd) usage

Lifespan of the primary implanted AUS device

SECONDARY OUTCOME MEASURES



Rates of:
Post-operative complication within 28 days
Infection or erosion of the device
Device failure

Results: Population



152 men had primary AUS insertion in study period with mean age **67.16 years**

Mean **follow up 5.7 years** (0.14-14.15)
17 men deceased at time of review/last follow up



39 men (25.66%) had received radical or adjuvant **radiotherapy** as well as prostatectomy

Type of prostatectomy	Number of patients	%
Open	27	17.8
Laparoscopic	51	33.5
Robotic	74	48.7

Table 1. Prostatectomy Surgical Technique

Results: Outcomes

Primary Outcome Measures

Outcome 1: Continence rates

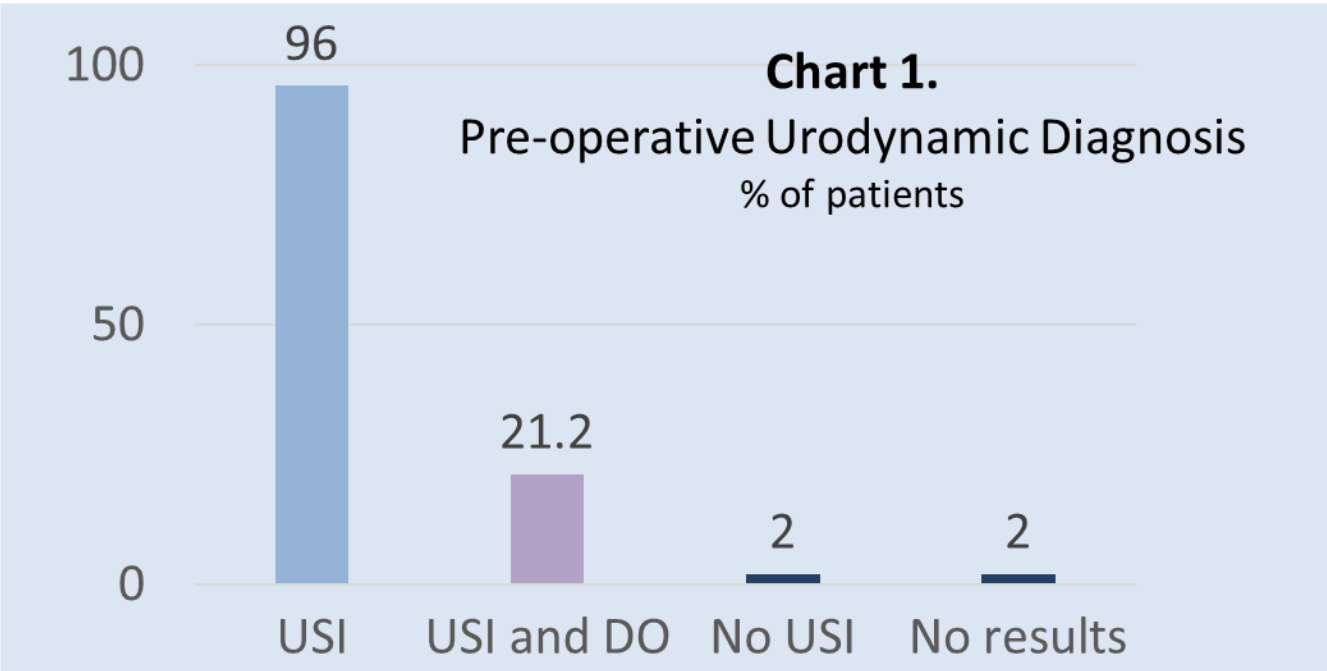
- **Mean pads per day (ppd) Pre op 4.1 Post op 0.8**
- **Reduction statistically significant $p < 0.02$**
- **Post op: 70 patients required no pads, 19 patients used a safety pad and 34 patients used 1 pad**
- **= social continence rate of 80%**

Outcome 2: Longevity of device

- **38 patients (25%) revision or removal of their device**
- **Average time to revision/removal was 3.8 years**
- **14 devices still in situ, 66 (57.9%) >5 years and 20 (17.5%) >10 years**

Secondary Outcome	Number of patients	%
Complication within 28d	14	9.2
AUR	9	5.9
Scrotal haematoma	2	1.3
Seroma	2	1.3
Epididymo-orchitis	1	0.7
Infection*	13	8.6
Erosion*	14	9.2
Device Failure	20	13.2

Table 2. Secondary Outcome Rates (* 8 = combination infection & erosion)



Conclusions

- Artificial urinary sphincter insertion remains the mainstay of surgical treatment for post prostatectomy incontinence
- AUS insertion has excellent continence levels following implantation
- More than half of devices last over 5 years, and rates of immediate post operative complications and later rates of infection and erosion of devices remain low

References

- 1) Haglind, E., et al. Urinary Incontinence and Erectile Dysfunction After Robotic Versus Open Radical Prostatectomy: A Prospective, Controlled, Nonrandomised Trial. Eur Urol, 2015. 68: 216.
- 2) Cornu, JN et al. EAU Guidelines on non-neurogenic male lower urinary tract symptoms (LUTS). EAU Guidelines. Edn. presented at the EAU Annual Congress Milan March 2023. ISBN 978-94-92671-19-6.
- 3) Office For National Statistics UK (Sept 2021). National Life Tables – life expectancy in the UK: 2018 to 2020. Accessed 01/04/2023 at <https://www.ons.gov.uk/peoplepopulationandcommunity/birthsdeathsandmarriages/lifeexpectancies/bulletins/nationallifetablesunitedkingdom/2018to2020>