

ARTIFICIAL URINARY SPHINCTER AND THE BULBAR MALE SLING IN THE TREATMENT OF POST-PROSTATECTOMY INCONTINENCE: A COMPARISON STUDY

Hypothesis / aims of study

Urinary incontinence is a troublesome complication in a minority of men following radical prostatectomy. The artificial urinary sphincter (AUS) remains the gold standard for post-prostatectomy incontinence (PPI) (1); however, other treatment options are available, including various sling procedures. We compare the preoperative characteristics and postoperative outcomes of patients who underwent either insertion of AUS or 'In-Vance' male sling in 2 groups of male patients.

Study design, materials and methods

A double-cohort study was undertaken of patients who underwent AUS or sling insertions between February 2002 and September 2004. Patient records were reviewed to determine preoperative characteristics including age, previous radiation, bladder neck contractures, previous transurethral injections, and numbers of pads used. Video-urodynamics with pressure/flow studies were carried out on all patients. Postoperative outcomes were measured by determining the quantification of pad usage and administering the International Consultation on Incontinence Questionnaire: Short Form (ICIQ-SF). In addition, the "Quality of Life Due to Urinary Symptoms" question of the International Prostate Symptom Score (IPSS QOL) were recorded pre- and postoperatively. The questionnaires administered to the patients on follow-up or were mailed. Ethics review board approval was received to carry out the study.

Results

Fifty-seven patients with an average age of 67 years (48 – 83) were followed up. Twenty six underwent insertion of AUS and 31 had sling procedures using the bone anchor system. No difference in preoperative demographics or urodynamics existed except for bladder neck contracture (46% in AUS vs. 17% in sling groups; $p < 0.05$). Severity of incontinence as defined by average number of pads/day was more severe in the AUS group (6.5 in AUS vs. 4.5 in sling groups; $p = 0.02$). Both groups of patients were "unhappy" pre-operatively in response to the IPSS QOL question. Mean follow-up was 30.4 (12.9 – 44.4) months for the AUS and 25.8 (12.7 – 42.2) months for the sling patients. The postoperative results are in the table. Postoperatively, the average number of daily pad usage was 1.38 for the AUS group and 1.57 for the sling group with a concomitant significant reduction of 5.2 and 2.9 pads, respectively. All of the patients completed the questionnaires. Out of a total score of 21, the AUS and the sling groups scored similarly with regard to the ICIQ-SF questionnaire, 7.42 and 5.93 respectively. Overall, both groups were equally "mostly satisfied" in response to the IPSS QOL question, postoperatively. Three sling patients (10%) required a tightening procedure and the slings were removed in four (13%) due to infection and erosion. In comparison, 2 patients (8%) had to have the AUS removed due to erosion and a further 2 (8%) required revision.

Parameter	Sling	AUS	P Value
ICIQ-SF	5.9	7.4	> 0.05
ICIQ-SF QoL	1.7	2.4	> 0.05
Mean change in no. pads/day	-2.9	-5.2	<0.01
0 pad/day	45%	31%	>0.05
1 pad/day	32%	42%	>0.05

Interpretation of results

The overall results appeared to be similar in both groups, apart from the greater decrease in postoperative pad use in the AUS versus the sling group.

Concluding message

The postoperative outcomes were similar in both groups despite the more severe incontinence in the AUS patients pre-operatively. Patients with mild to moderate PPI can be counseled to have equally efficacious outcomes undergoing sling insertions as AUS. The complications and revision rates in both the AUS and the sling groups were comparable.

References

1. 3rd International Consultation on Incontinence, 2005; pp 1241-1296.

FUNDING: NONE
DISCLOSURES: NONE

HUMAN SUBJECTS: This study was approved by the Sunnybrook Health Sciences Centre and followed the Declaration of Helsinki Informed consent was obtained from the patients.