

LONG-TERM OUTCOME AND DURABILITY OF THE ARTIFICIAL SPHINCTER FOR POST-PROSTATECTOMY INCONTINENCE

Aims of Study

The artificial urinary sphincter (AUS) is accepted therapy for post-prostatectomy stress incontinence. Although there are some long-term studies published in adult men [1,2] more data are needed regarding long-term outcome to accurately predict the durability and cost of using the AUS. This study was performed to compare 2 groups of concurrently treated patients, those who had the stress incontinence after radical prostatectomy (RP) for prostate cancer and after transurethral prostatectomy (TURP) for benign prostatic obstruction. All of the patients had the procedures over a 19-year period were followed.

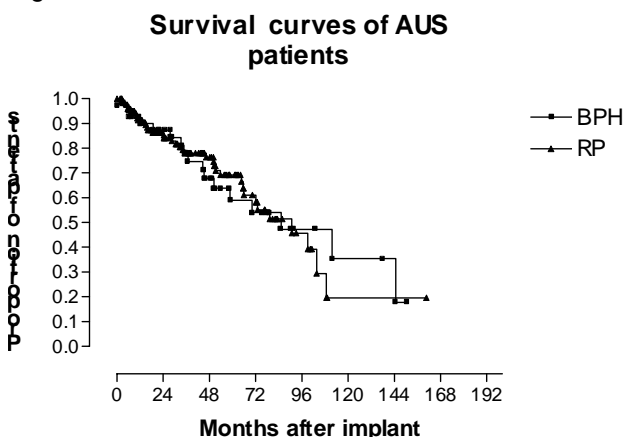
Methods

Data were collected on all 170 patients undergoing AUS implantation on an ongoing basis. Forty-one patients were implanted for treatment of moderate to severe stress urinary incontinence after TURP and 129 after RP. Records included demographics, AUS parameters, continence outcomes, complications, reinterventions or revisions, and long-term follow-up. Continence outcomes were classified as success (2 or fewer pads/day), improved (3 pads/day), failed (no change or removal for complications). Statistical analysis was performed using unpaired t tests and chi-square to compare group parameters and Kaplan-Meier survival curves for durability.

Results

The age of the patients in the TURP group (mean 70.2 years) was older than that of the RP group (mean 66.9 years) ($P < 0.05$). The follow-up period was also longer in the TURP versus the RP group (means of 6.31 years and 4.43 years respectively) ($P < 0.05$). The overall reintervention rate of the TURP group (17/41 or 41%) was similar to that of the RP group (38/129 or 29%) ($P > 0.05$). The rate increased with time in both groups. The reintervention rate after 5 years was 58% in the RP group and 48% in the TURP group ($P > 0.05$) and was significantly greater than that seen before 5 years. Infection/erosion were similar in both groups, 4/41 (10%) in the RP group and 5/129 (4%) ($P > 0.05$). Kaplan-Meier survival curves tracing durability of the AUS until the first revision or total length of follow-up was similar in both groups (Log rank test $P > 0.05$) (Figure 1). Median survival of the AUS prior to revision in the TURP group was 7.56 years and was statistically similar to that for the RP group, which was 7.1 years. Most of the patients in both groups underwent successful revisions and continued with their devices. No difference was seen in continence outcome between the 2 groups ($P > 0.05$). In the TURP group 30(73%) were successful, 3(7%) were improved, and 8(20%) failed, whereas in the RP group 104(81%) were successful, 12(9%) improved, and 13(10%) failed during the follow-up period.

Figure 1.



Conclusions

Similar AUS success and durability are seen with the AUS with both types of post-prostatectomy incontinence. Reinterventions were also similar in both groups and more common after 5 years than earlier.

Most patients continued with their devices after successful revisions. The younger age and shorter duration of follow-up of the RP group likely reflects the change in relative frequency of the different types of prostate surgery.

References

1. Klijn AJ, Hop WCJ, Mickisch G, Schröder FH, Bosch JLHR. The artificial urinary sphincter in men incontinent after radical prostatectomy: 5 year actuarial adequate function rates. Br. J. Urol. 82:530, 1998.
2. Elliott DS, Barrett DM: Mayo Clinic long-term analysis of the functional durability of the AMS 800 artificial urinary sphincter a review of 323 cases. J Urol 159:1206-1208, 1999.