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15 YEARS OF EXPERIENCE WITH THE ARTIFICIAL URINARY SPHINCTER: CHANGING INDICATIONS AND LONG-TERM OUTCOMES.

Hypothesis / aims of study

The artificial urinary sphincter (AUS) is being used increasingly for the treatment of male stress urinary incontinence. We report a single surgeon's 15 year experience with the AUS. We describe how the indications for AUS insertion have changed and report on their safety, effectiveness and durability.

Study design, materials and methods

All men who had an AUS for stress urinary incontinence at our institution between 1992 and 2008 were identified from a prospectively maintained database. Procedural data and indications for treatment were abstracted from the medical case notes. The primary safety outcome was a complication of treatment that required removal or revision of the AUS. Effectiveness was assessed at the time of outpatient review in terms of continence and overall satisfaction, and later continence outcomes and quality of life were evaluated with the ICIQ-UI short form questionnaire.

Results

Between 1992 and 2008, 37 men (mean age, 64 years) were treated with an AUS for stress urinary incontinence. We found a dramatic increase in the use of the AUS at our institution recently. For example, 13 procedures were undertaken in the last two years of the study alone. Incontinence after radical prostatectomy was increasingly the indication for AUS and the reason for treatment in 25 patients (68%) (see Figure 1). We found that the AUS complication rate was high - 14 men (38%) required a revision procedure for mechanical failure (10 men, 27%), erosion (3 men, 11%) or infection (1 man, 3%). However, overall satisfaction and continence outcomes within one year of surgery were excellent. Of the 30 patients for whom these data were available, 29 (97%) were satisfied with the outcome of their surgery. 24 men (80%) needed to wear one pad or less per day, five men (17%) were socially dry and only one man (3%) was still incontinent. Prolonged follow-up of more than 5 years (14 patients) showed these outcomes were durable. The ICIQ-UI short form was completed by 21 men. When answering item five of the questionnaire "Overall, how much does leaking interfere with your everyday life" the mean score was 2 (0 – not at all, 10 – a great deal).

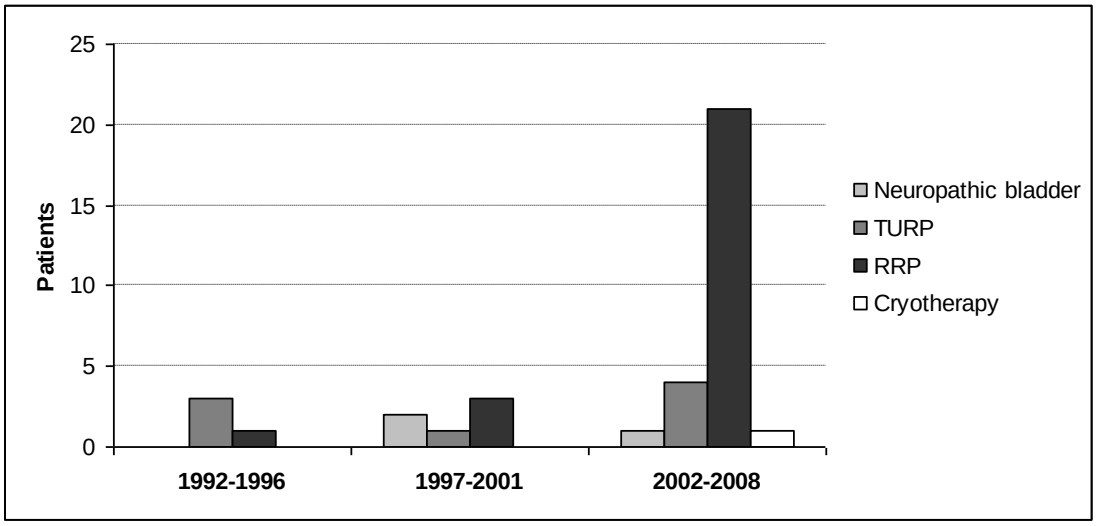
Interpretation of results

Only about one hundred AUS are inserted in the UK each year (1). However, our findings are in keeping with national data that show that their use has recently increased greatly (1). The very high rates of satisfaction and excellent continence rates reported in this series compare favourably with other studies (2). The popularity of the AUS appears to be due to its long-term effectiveness while accepting the need for revision procedures in a considerable number of patients. The AUS may therefore be considered the treatment of choice for post-radical prostatectomy incontinence. To our knowledge this is the first study that has used the ICIQ-UI to evaluate the effectiveness of the AUS. We found the ICIQ-UI to be a simple and valid approach that supported the continence and satisfaction outcomes reported by patients at the time of their out-patient consultation.

Concluding message

The AUS has a relatively high complication rate but overall men can expect excellent continence outcomes and very high satisfaction rates. The ICIQ-UI short form is a valuable instrument to assess the effectiveness of the AUS.

Figure 1. Changing indications for AUS insertion



References

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2. Lai HH, Hsu EI, Teh BS, et al. 13 years of experience with artificial urinary sphincter implantation at Baylor College of Medicine. J Urol. 2007;177:1021-5

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Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**No**
This study did not require eithics committee approval because	**It was an audit**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**No**