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LONG TERM OUTCOMES OF ARTIFICIAL URINARY SPHINCTER IN PATIENTS WITH HISTORY OF RADIATION THERAPY OR PREVIOUS URETHRAL SURGERY

Hypothesis / aims of study
The artificial urinary sphincter (AUS) has proven to be a successful treatment for men with stress urinary incontinence (SUI). However, there are limited outcomes studies evaluating the efficacy of the AUS in patients with history of radiation therapy, multiple previous AUS placements, or previously removed AUS for urethral erosion. The purpose of this study is to report our long term outcomes after undergoing AUS placement in this difficult cohort of patients.
Study design, materials and methods
A retrospective chart review of 110 patients undergoing placement of AUS for SUI between 1990 and 2006 was performed. Patients with history of radiation therapy, eroded AUS, or multiple previous AUS placement were selected. A questionnaire assessing urinary control and patient satisfaction were mailed to all patients. Urinary control was assessed by the presence and quality of urinary leakage as well as the type and number of pads used three months post operatively and at present. Satisfaction, ease of use and pain was also assessed on a 10 point scale at both time intervals.
Results
60 patients responded to the questionnaire, of which 15 had previous history of radiation therapy and 8 had multiple AUS previously placed (two patients had history of both). A total of 15 AUS devices had been placed at outside institutions: two tandem cuffs, one transcorporeal cuff, and two had a combined AUS and inflatable penile prosthesis. Six patients had their AUSs removed for erosion. The average and median follow-up was 6.1 and 4 years (range 2-16 years). In this complex group of patients, 14 had a single cuff placed, 3 had transcorporeal cuffs placed, 3 had tandem cuffs, and one had a tandem cuff with one cuff being transcorporeal. Six (29%) of the patients underwent one or more revisions of cuffs placed at our institution, 2 for product malfunction, 1 for atrophy, 2 for erosion or infection, and one for urinary retention. 76%of patients reported to be overall satisfied. Pad size and # were reduced dramatically in 71% of patients. One patient had a urethral injury requiring repair and delayed AUS placement.
Interpretation of results
With an overall satisfaction of 76% with mean follow –up of 6.1 years, the AUS should be considered as a long term, effective, and safe treatment option in complex patients with history of radiation therapy, urethral surgery, or failed AUS.
Concluding message
At present the AUS remains the gold standard for the treatment of stress urinary incontinence in the male patient. This device provides a long term, effective and safe treatment alternative even in these severely affected individuals.

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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?	**Yes**
Specify Name of Ethics Committee	**Institutional Review Board**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**