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OUTCOMES FOLLOWING THE TRANSCORPORAL PLACEMENT OF AN ARTIFICIAL URINARY SPHINCTER

Hypothesis / aims of study

Patients with a small caliber urethra, previous atrophy or fibrosis secondary to prior surgery have been shown to benefit from the trans-corporal placement of an artificial urinary sphincter[1]. We present a single surgeons experience with this technique including a new indication for placement. This study aims to evaluate patient satisfaction using a validated questionnaire and phone survey.

Study design, materials and methods

We retrospectively reviewed the charts of 11 consecutive patients who underwent trans-corporal placement of an artificial urinary sphincter by a single surgeon from 3/2003-10/2005. All patients were impotent pre-operatively without desire to re-initiate intercourse. Ten of the eleven patients were available for follow-up evaluation. We contacted these patients via telephone, mail or as part of a routine follow-up. All ten patients completed a validated questionnaire. In addition we reviewed the indications for surgery, pre-operative urodynamics, pad requirements, operative logs, post-operative clinic evaluations, complications, level of satisfaction and willingness to recommend the procedure to a friend.

Results

Eight of the patients underwent radical prostatectomy and three had primary external beam radiation. Five patients received either adjuvant radiation (3) or salvage cryotherapy (2). Prior to sphincter placement, four had collagen injections, one had a sub-urethral sling and one utilized a clamp. Seven patients underwent primary placement, two were placed due to intra-operative urethral injury while the other five were due to a small caliber urethra (less than 4 cm) measured at the time of implantation. The four secondary placements were due to either urethral atrophy (1) or planned placement secondary to prior scarring (3) from infection or erosion. Six patients had a 4 cm cuff, four had a 4.5 cm cuff and one patient a 5 cm cuff placed. The median operative time was 100 minutes (70-145) and the median blood loss was 25 cc (0-100). At a mean follow-up of 18.3 months (SD = 11.2), 70% of the patients required 0 -1 pad per day, 1 used 2 pads per day and two patients had significant leakage (4 and 8 PPD). Both patients experienced failure within one month of activation. The patient who required four pads per day had complete continence for one month following activation followed by a sudden return to baseline. He is currently scheduled for a re-evaluation. The second patient had the sole five centimeter cuff placed. He underwent urethroscopy and was found to have inadequate compression of his urethra. He is currently scheduled to undergo downsizing of his cuff. To date there have been no erosions, infections or explantations. ICS male short forms were completed by ten patients with the average Voiding score (VS) = 4 (0-11) and the average Irritative Score (IS) = 6.9 (1-17). Ninety percent of patients would recommend the procedure to a friend and ninety percent were either moderately (2) or very satisfied (7) with the procedure.

Interpretation of results

The transcorporal placement of an artificial urinary sphincter presents an excellent option in patients with a small caliber urethra, fibrosis or intra-operative urethral injury. The sphincter can be implanted with minimal blood loss and in a reasonable operative time. With intermediate follow-up, in a high risk population, there have been no infections, erosions or explantations. Overall, patients have significant improvement in continence status and have minimal voiding or irritative symptoms on a validated questionnaire.

Concluding message

Trans-corporal placement of an artificial urinary sphincter, in the impotent patient, is both safe and efficacious in patients with a small caliber or atrophic urethra. Patients with an intra-operative urethral injury had equal efficacy and level of satisfaction. Overall, patients expressed high satisfaction rates and would recommend the procedure to a friend.

References

1)Transcorporal Artificial Urinary Sphincter Cuff Placement in Cases Requiring Revision for Erosion and Urethral Atrophy. J Urol 167: 2075-2078, 2002.

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