

THE MALE SLING FOR STRESS URINARY INCONTINENCE

Aims of Study

Stress urinary incontinence (SUI) can be a bothersome complication of radical prostatectomy (RRP), and can occasionally occur after transurethral prostatectomy (TURP). Additionally, SUI may be a manifestation of neurogenic sphincteric insufficiency. Treatments have previously included external collection devices, penile clamps, transurethral bulking agents, and artificial urinary sphincter (AUS). We report a prospective study of the male sling for SUI.

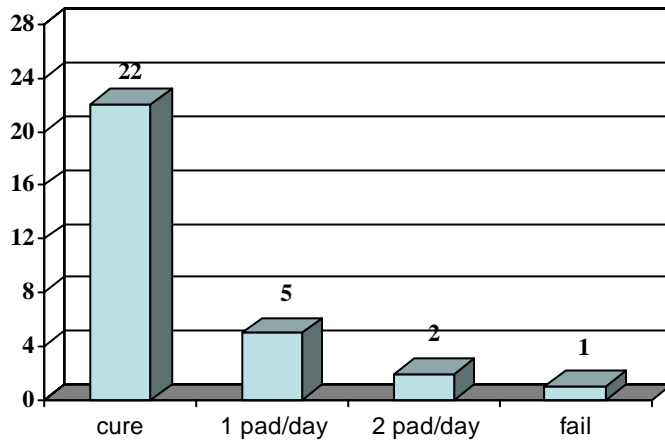
Methods

30 men (mean age=66 years) underwent placement of a male sling for SUI: 26 with post-RRP SUI, 2 with post-TURP SUI, 2 with neurogenic sphincteric dysfunction (1 myelomeningocele, 1 traumatic myelopathy). Four patients had undergone adjuvant radiation treatment, 2 had previous incision of an anastomotic stricture, 6 had undergone collagen injection (range 1-4 sessions), and 2 had previous AUS (1 with urethral erosion, 1 with infection x 2). Urodynamics were performed to assess bladder function and to measure antegrade and retrograde leak point pressure (RLPP). Through a 3.5 cm perineal incision, the bulbospongiosus muscle and pubic rami were exposed. Two titanium screws loaded with a #1 polypropylene sutures were placed in the antero-medial aspect of each descending ramus. The proximal sutures were just beneath the pubic symphysis, and the distal sutures were 2.5-3 cm. caudally. A 6 x 4 x 4 cm trapezoidal polypropylene mesh was placed over the bulbar urethra, and the sutures passed through the sling, 0.5 cm from each corner. Tension was adjusted until RLPP of 60 cm. water was achieved. Follow-up was via history, physical examination and administration of the incontinence section of the UCLA/RAND Prostate Cancer Index.

Results

Pre-operatively, all patients used 3 or more pads daily, and rated their SUI as severe. Mean pre-operative LPP was 26±3 cm. water. In 29 patients, and intra-operative RLPP of 60 cm. water was achieved, and in 1 with urethral fibrosis following an infected AUS, RLPP of only 25 cm. water could be achieved. Mean follow-up was 15 months (range=4-32). Overall, 22 patients (73%) were cured of their SUI, 5 (17%) rated their SUI as very small or small problem (1 pad per day), 2 (7%) rated their leakage as a moderate problem (2 pads per day), and 1 (3%) continued with leakage rated as severe (3 pads per day). Both individuals with post-TURP SUI were cured of their leakage, as were both patients with neurogenic sphincteric dysfunction. In the post-RRP group, 18 of 26 (69%) men with SUI were cured, including 1 of 2 (50%) with previous AUS, 4 of 6 (67%) status-post collagen injection, and 2 of 3 (67%) with adjuvant radiation. For the entire cohort, 27 of 30 (90%) use 1 pad or less daily, and 23 of 26 (88%) RRP patients use 1 or fewer pads per day. There was statistically significant improvement in each section of the questionnaire, and total RAND Incontinence Score improved from a mean of 63±9.8 to 411±23 post-operatively (p<0.001). There were no instances of urinary retention, infection, erosion, prolonged pain, or de novo voiding dysfunction. Residual urine measured < 60 cc in all patients.

Male Sling Results



Conclusions

Early results for the male sling compare favorably with those for the AUS, with a complete continence rate of 73%, and with 90% of patients using 1 pad or less daily. This minimally invasive technique has not been associated with any significant complications. Unlike the AUS, no manipulation is required for voiding. By compressing only the ventral aspect of the urethra, arterial and venous circulation is preserved, reducing the risk of urethral atrophy and device erosion. Longer-term follow up is necessary to establish the ultimate efficacy of this novel procedure.