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Title (type in CAPITAL LETTERS): ARTIFICIAL URINARY SPHINCTER FOR POST-PROSTATECTOMY INCONTINENCE: IMPACT OF PRIOR COLLAGEN INJECTION ON CLINICAL OUTCOME AND COST

Aim of Study: We retrospectively reviewed our experience with the artificial urinary sphincter (AUS) for men with persistent post-prostatectomy incontinence to determine whether prior collagen therapy had a negative impact on surgical outcomes, including patient satisfaction and complication rates. We calculated the additional time to regaining urinary control by repetitive trials of collagen injection therapy, and the direct costs of that therapy. Using the VLPP < 60 cm H2O as a prognosticator, we calculated the potential savings had these patients foregone collagen injection and received AUS primarily.

Methods: Thirty men (mean age 66.2, range 45 to 83) underwent placement of an artificial urinary sphincter for post-prostatectomy incontinence over 36 months. All patients had a primary diagnosis of prostate cancer. Of the 30 patients, 24 (80%) were incontinent following RRP and 6 (20%) after TURP. Mean age of patients was 66.2 years at the time of AUS implantation. Twenty-three men (76.6%) had prior collagen injection therapy (CI group); 7 patients were directly assigned to AUS implantation (non CI group). The mean number of treatment sessions for CI group was 2.9 (range 1 to 7). The mean time from prostatectomy to AUS implantation was 33.1 months (range 12 to 62) for all patients; for the non CI group it was 25.3 months, as opposed to 35.8 months for the CI group

Results: Intrinsic sphincter deficiency was the sole etiology of incontinence in most patients (83.3%). Five patients (16.7%) had concomitant detrusor instability. Mean pretreatment VLPP for all patients was 42.7 ± 21.4 cmH2O. Mean number of pads used per day was 5.8 ± 3.4. Six patients alternated the use of pads with the use of clamps or condom catheter to aid in controlling leakage. The median QOL index was 6 (range 3 to 6) and the median AUA symptom score was 13 (range 3 to 35). The mean VLPP, severity of symptoms (as measured by QOL and AUA symptom score) and number of pads/day were not significantly different between CI group and non CI group. After AUS mean number of pads per patient per day was significantly reduced to 0.8. The QOL index after AUS implantation improved to 1 and the surgical complication rate for the entire group was 13.3%. Comparison of patients in the CI group with the non CI group did not reveal any significant difference in terms of AUS efficacy or surgical complications. Among the CI group, 17/23 (73.9%) had a VLPP < 60cm H2O. Considering the mean additional period of incontinence (additional time between prostatectomy and implantation of AUS) to be 12.9 months, the costs of pads / day, and the average number of collagen syringes/patient, we calculated the direct costs for incontinence treatment. The additional costs for CI group was 85.6% higher than for patients triaged directly to AUS.

Conclusions: Prior collagen therapy did not adversely influence surgical complication rates nor compromise effectiveness of AUS. Using a VLPP cutoff of < 60 cmH2O as previously proposed would result in a significant decrease in the duration of incontinence and savings in health dollars for 3 out of 4 patients with post prostatectomy incontinence.