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THE MALE PERINEAL SLING FOR POST PROSTATECTOMY INCONTINENCE: PREDICTORS OF SUCCESS

Hypothesis / aims of study

The male perineal sling has recently become a popular treatment option for men with post prostatectomy incontinence (PPI) secondary to sphincteric insufficiency. Several authors have reported favourable "success" rates, but there is no standard definition of success. In addition, little is known about which patients are most appropriate for the procedure. The objective of this study was to assess the success of the perineal sling using objective criteria, and to determine which patients may be ideally suited for the procedure. Additionally the effects of the procedure on quality of life (QOL) were assessed.

Study design, materials and methods

Thirty-two men with varying degrees of PPI secondary to sphincteric insufficiency who underwent a perineal sling were prospectively evaluated. All men had the diagnosis confirmed by videourodynamics which included determination of abdominal leak point pressure (ALPP). Urodynamic methods, definitions and units conformed to standards of the ICS. Patients completed questionnaires before and after surgery including the American Urological Association Symptom Index (AUASI), Urogenital Distress Inventory (UDI-6), and Incontinence Impact Questionnaire (IIQ-7). All men performed a 24 hour pad test pre and post operatively. Perineal sling was done using the Invance bone anchoring system with synthetic graft. The procedure was considered a success if the patient was rendered pad free, or had a 24 hour pad test of $\leq$ 12 g, or had at least a 90% reduction in objective urine loss. Urodynamic parameters, pre-and postop pad weights and questionnaires were compared in successes and failures using the student's t-test.

Results

The mean age of patients was 67 years (45-84) and mean time from prostatectomy to sling was of 53.1 months (10-204). The mean follow up was 9.9 (3 – 28) months. Twenty one men (66%) had a successful result and 14 (44%, 67% of successes) were pad free. Mean preoperative pad weights were 224 (26-601) g for successes and 625 (101-1131) g for failures ($p<.0001$). ALPP for successes was 102 cmH20 (36-207) vs 67 cmH2O (30-141) for failures ($p=.01$). When analyzed by preop pad weight, a successful outcome was 83%, 100%, 29%, 20% for pad weight groups of 0-200 g, 201-400 g, 401-600 g and greater than 600g respectively. Mean postop pad weight was 6.2 g (0-25) in successes and 426 g (20-1065) in failures ($p<0.01$). All failures were evident within 2 months after surgery. Two failures in the 0-200 g pre op pad weight test group underwent revisions and were converted to successes at a mean follow up of 2 months. There was statistically significant improvement in UDI, and IIQ and UDIQOL in successes and no change in AUASI.

Interpretation of results

Short term results suggest that the male sling is a viable treatment option for men with PPI. It appears to have higher success rates in men with lower degrees of incontinence. This is best measured by pad testing as there is significant overlap in ALPP amongst successes and failures. Preoperative pad testing may be used to council patients regarding outcomes.

Concluding message

The male perineal sling is highly effective, in the short term, for men with mild to moderate degrees of stress incontinence after radical prostatectomy. It is less effective in patients with high grade stress incontinence.