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COMPARISON OF SURGICAL TREATMENTS FOR POST PROSTATECTOMY INCONTINENCE

Hypothesis / aims of study

This study was undertaken to assess the results of 3 procedures in 3 cohorts of men with stress urinary incontinence. We compare the Artificial Urinary Sphincter (AUS), the perineal bone anchored male sling (InVance) and adjustable peri-urethral balloons (ProACT) to determine how the preoperative characteristics and postoperative outcomes differ.

Study design, materials and methods

The study did not require ethical approval, but all patients gave informed consent. It was a retrospective review of patient records in a regional urology unit, of all men who underwent AUS and ProACT balloon insertion from August 2003 and InVance sling insertion from August 2004 for post prostatectomy incontinence, until February 2006. Postoperative assessment included complications, patient satisfaction, and number of pads used. The procedure was determined a success by patient satisfaction and requirement of 1 or less pads per 24 hours.

Results

22 men underwent 25 procedures. 2 men had ProACT insertion and then went on to have an InVance procedure. The median age of the men at the time of the first incontinence procedure was 73 years, with a range of 50-80 years. The median time from prostatectomy to surgical intervention for incontinence was 37 months, with a range of 2-204 months. The median follow up of patients receiving a ProACT was 16 months, AUS was 13 months and 7 months for InVance. 18 men had urodynamics studies before surgery that included valsalva abdominal leak point pressure (ALPP) and 14 men had treated bladder neck strictures (BNS). Some patients required additional procedures. These included: reposition of 3 ProACT balloons (2 of which were removed as failures), 2 urethral erosions required removal at 4 and 24 months, 1 InVance sling removal for infection and 1 AUS pump reposition.

Table 1: Pre-operative parameters

	Treament (n=25)	**BNS (n=14)**	**ALPP (20-50cmH_20) (n=8)**	**>3 pads/24 hrs (n=9)**	**Mean number of pads/24 hrs**
ProACT	13	7 (54%)	4 (31%)	5 (38%)	3.5
INVANCE	7	4 (57%)	3 (43%)	2 (33%)	3.2
AUS	5	3 (60%)	1 (20%)	2 (40%)	3.6

Table 2: Post-operative outcome

	Treatment (n=25)	**Success (≤1 pad) (n=16)**	**Re-operation (n=9)**
ProACT	13	6 (46%)	7
InVance	7	5 (71%)	1
AUS	5	5 (100%)	1

Interpretation of results

Pre-operative parameters of incontinence severity and BNS were equivalent between the groups. The ProACT group had a lower continence success rate (46%, p value 0.5) and higher re-operative rate than the InVance group (71%, p value 0.2) or AUS group (100%, p value 0.03). Of the ProACT group, only 2 of the 7 men with BNS regained continence satisfactorily. BNS and treatment creates peri-urethral scarring that makes insertion of the ProACT balloon difficult. Four of the 7 men required re-operation. All 7 of the men with BNS in the AUS and InVance groups fulfilled the study definition of continence success (≤1 pad/24 hrs). Analysis of the 6 men in the ProACT group without BNS, revealed 5 regained continence (83%), 4 of whom had an ALPP <50 cm H2O or >3 pads/day.

Concluding message

All procedures appear to be of benefit in the management of post prostatectomy incontinence, *however*, we would not recommend the use of the ProACT device with BNS due to the poor continence outcome and complications observed in our study population.

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HUMAN SUBJECTS: This study did not need ethical approval because Not required as informed consent was obtained from all patients but followed the Declaration of Helsinki Informed consent was obtained from the patients.