

LONG TERM OUTCOMES OF THE ADVANCE MALE TRANSOBTURATOR SLING FOR TREATMENT OF POST-PROSTATECTOMY INCONTINENCE: IMPACT OF RADIOTHERAPY AND STORAGE DYSFUNCTION

Hypothesis / aims of study

The AdVance sling is increasingly the standard of care for mild to moderate post-prostatectomy incontinence (PPI). This study aims to determine the long-term durability and patient satisfaction of the AdVance transobturator sling and the impact of radiotherapy and pre-operative urodynamic findings on long-term outcome.

Study design, materials and methods

55 men undergoing AdVance sling for PPI by three Urologists between 2008-13 were reviewed. Long-term follow-up was assessed by telephone in 2014. Pre-operative information regarding radiotherapy, pads per day (PPD), 24-hour pad weight and urodynamics was collected. Early post-op PPD (3-6 months post-op) was collected. Patient Global Impression of Improvement (PGI-I) score and PPD were obtained at late follow-up by telephone. A linear mixed model was used to assess change in pad use over time and a multivariate analysis was used to assess factors influencing pad use at telephone follow-up. Variables included were pre-op PPD, radiotherapy, detrusor overactivity (DO) and reduced compliance. Student t-tests were used to compare mean PGI-I scores for subgroup analyses.

Results

Mean follow-up was 36 months (range: 14-72), age at operation 67.3 years (range: 52-82) and time between radical prostatectomy and AdVance sling 45.6 months (range: 15-114). 7 of 55 men had prior radiotherapy; 2 had prior HIFU. At urodynamics 80% of men had abdominal leak point pressure >100 cmH₂O, 20 men (36%) had overactive bladder (5 men had DO and 15 had reduced compliance). Pre-op mean 24-hour pad weight was 263 g (range: 20-900) and mean PPD 2.57±1.3 (95% CI).

In the early post-op period (3-6 months), mean PPD was 0.385±0.194; at late telephone follow-up, mean PPD was 0.752±0.335. Comparing pre-op to late (telephone) post-op pad usage, men were using on average 1.86±0.427 less PPD (p<0.001).

From multivariate analysis, previous radiotherapy and the presence of DO were the only two factors affecting long-term outcome. Reduced bladder compliance was not found to be an independent predictor of long-term outcome i.e. it did not adversely affect continence in the same way that DO did. After adjusting for pre-op pad use, at late follow-up men who had radiotherapy used 1.7 more PPD (p=0.001) and men who had DO used 1.2 more PPD (p=0.02). Assessing the effect of time on PPD post sling surgery, comparing pad usage at early to late follow-up: men who had neither radiotherapy nor DO were using an extra 0.2±0.2 PPD (p=0.11), men who had previously had radiotherapy were using an extra 1.4±1.4 PPD (p<0.001) and men who had DO were using an extra 1.0±1.0 PPD (p=0.023). Comparing pre-op to late post-op PPD: men who had neither radiotherapy nor DO were using 1.8±1.4 less PPD (p<0.0001) while men who had previously had radiotherapy or DO were using only 0.4±0.5 less PPD (p=0.7).

Overall mean PGI-I score at phone follow-up was 2.1±1.45 (between 'much better' and 'a little better'). PGI-I score for men who had neither radiotherapy nor DO was 1.68±1.22 whilst PGI-I score for men who had radiotherapy or DO was 4.14±0.69 (p=0.0003).

Interpretation of results

The AdVance sling has good medium to long-term durability in treatment of PPI in men without a history of radiotherapy or DO.

In men with a history of radiotherapy or DO, whilst patient satisfaction and pad usage improved in the short-term following sling surgery the benefits are not sustained in the longer-term, with most patients reporting no difference in pad usage or satisfaction compared to before sling surgery.

Concluding message

Caution should be taken when considering the AdVance sling in men with a history of DO or radiotherapy.

Disclosures

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