

RESULTS OF THE RETROURETHRAL FUNCTIONAL SLING (ADVANCE SLING) FOR MALE STRESS URINARY INCONTINENCE

Hypothesis / aims of study

For men stress urinary incontinence (SUI) after surgical treatment for prostate cancer is besides erectile dysfunction the most feared complication. Despite improved surgical techniques still a non insignificant number of patients are suffering from postoperative stress incontinence. Although incontinence rates have been decreased due to modified surgical techniques for radical prostatectomy the rate remains after one year < 5%. For the treatment minimal-invasive surgeries are strongly demanded by the patients. We evaluated the effectiveness of a retrourethral non-obstructive functional sling for the treatment of SUI.

Study design, materials and methods

Between February 2006 and September 2008, 124 patients with mild to severe SUI were prospectively treated with a rethrourethral sling (AdVance®). 11 patients were lost to follow up and excluded from the analysis. The origin of the incontinence was in all patients a previous radical prostatectomy. 13 of the patients had in addition adjuvant radiotherapy. Age ranged from 54 to 87 years (median 69 years). All patients had received other treatments for the SUI prior the retrourethral sling. Everybody had conservative treatment like pelvic muscle training, electrostimulation, biofeedback and behavioural therapy. 20 patients had before pharmacological treatment, one patient received a different sling and three patients had an artificial sphincter before, but in all patients the sphincter was explanted due to complications. 13 patients had a stem cell therapy and 13 patients received a bulking agent therapy prior the implantation of the Advance sling. Preoperative a one-hour and a 24-hour pad test were performed. All patients underwent preoperative an urodynamic assessment including a stress test, an uroflowmetrie, ultrasound for residual urine, flexible cystoscopy and a miction cystography. In the flexible cystoscopy a residual function of the sphincter has to be proven. Daily pad use, the I-QOL score and the ICIQ-UI SF score were obtained. Postoperative the daily pad-use, a one-hour and a 24-hour pad test, residual urine, uroflowmetrie, I-QOL score and the ICIQ-UI SF score were performed. 19 patients showed preoperative mild incontinence (1-2 pads per day), 60 patients had moderate incontinence (3-5 pads per day) and 34 patients showed severe incontinence (6 or more pads per day). 113 patients could be followed up for 6 months and 70 patients for 12 months. Cure rate was defined as no pad use or one pad for security reasons, improved rate as 1-2 pads or a reduction of pads ≥ 50%.

Results

After 6 months a cure rate of 55.8% and an improved rate of 27.4% could be achieved. 19 patients (16.8%) showed no significant improvement.

After 12 months a cure rate of 51.4% and an improved rate of 25.7% could be achieved. 16 patients (22.9%) showed no significant improvement.

A postoperative acute retention was seen in 16 patients (14.1%). All these patients were treated with a catheter. The catheter could be removed after 2-10 weeks.

After 6 months as well as after 12 months a significant reduction of pad usage and a significant reduction of the pad weight in the pad tests could be achieved.

No significant changes were seen in residual urine and flow rate after 6 and 12 months.

The ICIQ-UI SF score was decreased and the I-QOL score was increased significantly.

No severe complications were seen.

There was no significant difference in the outcome of patients with and without prior radiotherapy.

Interpretation of results

The Advance sling is a save and minimal-invasive treatment for male SUI with reproducible and stable results. The postoperative results after prior radiotherapy are comparable to the result for patients without radiotherapy. Postoperatively in approx. 15% of the cases an acute urinary retention occurs, but it resolves at least after 10 weeks without any invasive treatments. Preoperatively a good residual function of the sphincter must be ensured for satisfying results.

Concluding message

The functional retrourethral sling offers a save and minimal-invasive treatment option for male SUI after radical prostatectomy with good results in patients with and without prior radiotherapy.

<i>Specify source of funding or grant</i>	None
<i>Is this a clinical trial?</i>	No
<i>What were the subjects in the study?</i>	HUMAN
<i>Was this study approved by an ethics committee?</i>	No
<i>This study did not require eithics committee approval because</i>	We evaluated the effectiveness of an approved sling for male stress urinary incontinence.
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes