

THE NEW PARADIGM OF STRESS URINARY INCONTINENCE TREATMENT: ADJUSTABLE SLING FOR ALL CASES

Introduction

Suburethral synthetic sling is a well-known option for treating stress urinary incontinence (SUI) in women. Nevertheless, the most difficult issue up-to-date is the degree of the tape tension whose value depends on the surgeon preference and is chosen subjectively. The imbalance between insufficient or excessive tension of the sling leads to decreased effectiveness of the surgery or can cause urinary obstruction. In fact, the objective cure rate as shown by various publications is 62-98% with an average 7,3% (0-33.9%) rate of urinary outflow obstruction development. There are several adjustable systems for SUI treatment; however, they are not often implemented and used mostly in complicated cases. The aim of this study was to assess the outcomes of SUI treatment with our own adjustable tape.

Design

Our prospective study included 157 women with urodynamic stress incontinence. All patients underwent the transobturator adjustable midurethral tape placement between January 2015 and June 2016. This monofilament polypropylene tape has unstretchable structure, atraumatic edges and simple construction. It can be adjusted during 2 days after surgery by increasing (tightening the ends of the tape left uncut) or decreasing its tension (pulling down the central part of the tape by special adjustment threads). The pre- and postoperative evaluation included medical history, vaginal examination, cough stress test, uroflowmetry, urodynamics, bladder ultrasound and post-void residual (PVR) urine measurement, validated questionnaires (UDI-6, UIQ-6, PFIQ-7, ICIQ-SF), 1-hour Pad-test.

Results

Mean follow-up period was $12,25 \pm 2,25$ months. Mean operative time was $12,68 \pm 3,37$ min. One day after surgery 65 (41,40%) women needed tension readjustment. In 53 patients (33,7%) increasing of the tape tension was required due to continued urine loss with stress test, of those women 7 (4,45%) had a positive stress test only in the standing position. The other 12 (7,64%) women had obstructive flow pattern combined with PVR >100 ml. After adjustment all patients were continent, with no PVR. No cases of intraoperative bladder or urethral injury, as well as clinically significant bleeding, were detected.

After 12-month follow-up, there was no significant decrease of Qmax ($p=0,899$). The objective cure rate was 96,17% ($n=151$). There were no cases of wound infections, vaginal mesh extrusion or urinary obstruction. De novo urgency and de novo urgent urinary incontinence appeared in 4 (2,54%) and 4 (2,54%) patients respectively. Recurrent lower urinary tract infections bothered 2 (0,88%) patients. According to results of the questionnaires scores, 98,09% ($n=154$) patients noted significant improvement of postoperative quality of life ($p<0,001$).

Conclusion

Our method of transobturator suburethral adjustable sling placement does not differ from classical technique described by D.Leval. It neither complicates the surgery nor increases the operation time. It allows the surgeon, even with a little experience, to achieve optimal tape tension, to achieve better results and to avoid serious complications, such as obstructive voiding and urinary retention. Our experience shows, that the ability to tune the tape may sufficiently improve the outcomes even in uncomplicated cases. In our opinion, the adjustable systems, such as presented, can be a new standard of treatment female stress urinary incontinence in future.

Disclosures

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