

IMPACT OF MID-URETHRAL SLINGS ON OAB SYMPTOMS

Hypothesis / aims of study

The objective of our study is to demonstrate the improvement of OAB symptoms in patients with mixed urinary incontinence after implantation of mid-urethral slings.

Many studies are made in order to demonstrate the impact of mid-urethral sling procedures on stress incontinence. In our patients, the largest group is suffering from any form of mixed incontinence. We wondered, if the presence of OAB symptoms would be rather a contraindication for the implantation of mid-urethral slings. At least, we hoped that they would not worsen OAB symptoms. We were afraid of additional de-novo-urge symptoms caused by the sling. On the other hand, we carefully proved their degree of stress incontinence, which was at the end the reason for surgical procedure. In this retrospective study, we looked at the development of OAB symptoms in our patients within 6 months from beginning of therapy. We compared different groups of lower urinary tract symptoms and therapies.

Study design, materials and methods

172 patients were followed in our clinic between January 2008 to April 2009 from their first examination (incl. urodynamics and ultrasound) over to 6 months after beginning therapy. We divided the patients into the following groups of primary diagnose: 1) stress incontinence, 2) mixed incontinence with predominant stress incontinence, 3) OAB dry or wet, 4) mixed incontinence with predominant OAB symptoms. The key question in order to decide, which was the predominance in patients with mixed incontinence was the following: „What is for you the most bothersome?“

Patients in group 1 were treated according to degree and wish of patients by pelvic floor education resp. surgical procedure. In group 2 (mixed incontinence with predominant stress incontinence) were 59 patients, 48 of them were treated by mid-urethral sling implantation +/- anticholinergics, 4 underwent Burch colposuspension, 8 were treated conservatively, mainly because they refused operation. Patients in group 3 and 4 were treated mainly by anticholinergics and behavioral therapy, some additionally by pelvic floor education, if necessary by operation for descensus and in group 4 only three by implantation of midurethral sling. 6 months after beginning our therapy, the patients were controlled and asked if they further required any therapy for their bladder problems. At the same time, we also performed an analysis of their OAB symptoms by OAB questionnaire (European OAB Faculty 2004).

Results

The group with the lowest need of anticholinergical therapy 6 months after beginning resp. performance of proposed therapy was the group with stress incontinence (98 %), followed by the group of patients with mixed incontinence with predominant stress incontinence (table 1). In this group, 71 % of the patients who underwent mid-urethral sling procedure, did not require pharmacological or other therapy following this operation, whereas in the group of patients with OAB alone resp. of those with mixed incontinence with predominant OAB symptoms, these numbers are 39 % resp. 21 %. We also could demonstrate, that the specific OAB symptoms were significantly improved by the mid-urethral sling procedure (table 2). The score for OAB symptoms half a year after mid-urethral sling procedure diminished in average about 5,8 points, the score for embarrassment by OAB symptoms about 6,6 points. In 68 % of the patients with mixed incontinence and performance of mid-urethral sling procedure +/- anticholinergics, the OAB-scores were diminished to a level lower than 4 in 68 %.

Interpretation of results

In patients with mixed incontinence, but clearly demonstrated part of stress incontinence, mid-urethral sling procedures have in most cases a positive influence on OAB symptoms. Only in about a third are further needed anticholinergics.

Concluding message

Improvement of OAB symptoms can be expected in patients who suffer from mixed incontinence with predominant stress incontinence and who undergo mid-urethral sling procedure.

Table 1: percentage of patients who do **not require anticholinergical** therapy **6 months after** beginning therapy specific to diagnose at first examination

	SUI	Mixed inkont. with predom. SUI	OAB	Mixed inkont. with predom. OAB
Number of patients	57	59	23	33
Not requiring anticholinergical therapy for OAB symptoms 6 months after beginning therapy*	56 (98%)	39 (66%) those after mid-urethral sling: 34/48 (71%)	9 (39%)	7 (21%)

* The differences between the groups were proven by Chi-square test to be of statistical significance ($p < 0,05$)

Table 2: improvement resp. state of OAB-symptoms **6 months after** beginning therapy specific to diagnose

	Mixed inkontinence with predom. SUI - those after mid-urethral sling	OAB	Mixed inkontinence with predom. OAB
Number of patients	48	23	32
Mean difference (e.g. improvement) of OAB-scores**	5,8/6,6	2,0/2,6	2,8/3,6
Percentage of patients with OAB-scores < 4	68%	28%	44%

questionnaire of European OAB faculty 2004 results in scores from **0 (no OAB-symptoms/ no embarassment) to **12** (strong OAB symptoms / **very bothersome** for patient)

<i>Specify source of funding or grant</i>	none
<i>Is this a clinical trial?</i>	Yes
<i>Is this study registered in a public clinical trials registry?</i>	No
<i>Is this a Randomised Controlled Trial (RCT)?</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 ethics committee approval because</i>	it did not have consequences on therapy decision
<i>Was the Declaration of Helsinki followed?</i>	Yes
<i>Was informed consent obtained from the patients?</i>	Yes