

## THE INFLUENCE OF PREOPERATIVE DETRUSOR UNDERACTIVITY ON THE CONTINENCE RATE AND SATISFACTION AFTER MIDURETHRAL SLING IN PATIENTS WITH STRESS URINARY INCONTINENCE

### Hypothesis / aims of study

Recent studies have shown that women with continence problems may have voiding symptoms as well as storage symptoms. Among the patients with stress urinary incontinence (SUI) and voiding symptoms, some patients have voiding problems such as detrusor underactivities. In addition, detrusor underactivity can be observed in the patient with SUI who doesn't have voiding symptoms. Midurethral sling is considered as a successful treatment option for SUI. Underlying detrusor underactivity is seemed to influence the results of midurethral sling and postoperative voiding pattern in patients with SUI [1]. However, there have not been many studies about that. Therefore, the aim of this study was to determine the effects of detrusor underactivity on post-operative results after midurethral sling in patients with SUI.

### Study design, materials and methods

Medical records of 41 female patients who had detrusor underactivity and undergone midurethral sling procedure were reviewed from January 2004 to December 2006. The patients with a follow-up of at least 12 months were included and patients who had neurologic diseases and previous radical pelvic surgeries were excluded from this study. The preoperative evaluation included a careful history taking, physical examination, 3-days consecutive voiding diary and urodynamic study. The patients who failed to void during pressure flow study were also excluded. Detrusor underactivity was defined as a maximum flow rate (Qmax) less than 15 mL/sec and a detrusor pressure at maximum flow rate (PdetQmax) less than 20 cmH<sub>2</sub>O based on pressure flow study [2]. The postoperative evaluation included a continence rates, questionnaire regarding patient satisfaction (5: very satisfied, 1: very unsatisfied), uroflowmetry and residual urine volume.

### Results

The mean patient age was 52.9 (39-68) years. The mean follow up period was 28.9 months. Preoperatively, 39 (95%) patients had storage symptoms and 10 (24%) had voiding symptoms. Mean Qmax was 12.6±2.1 mL/sec, mean postvoid residual (PVR) volume was 16.1±32.3 mL and mean PdetQmax was 13.1±4.7 cmH<sub>2</sub>O. Postoperative continence rate was 88% (36/41). Five patients experienced minimal incontinence when they coughed violently. Mean patient satisfaction was 3.7±0.9. Overall postoperative voiding symptoms was reported by 11 (27%) patients; 8 (20%) patients had weak urinary stream and 5 (12%) had residual urine sensation. Postoperatively, 3 patients needed medication with alpha blocker because of voiding difficulty. There was no significant difference between preoperative and postoperative Qmax. However, postoperative PVR (26.1±27.9 mL) was considerably increased compared to the preoperative PVR (16.1±32.3 mL) (p<0.05).

### Interpretation of results

After midurethral sling for the patients with SUI underlying detrusor underactivity, continence rates and patient satisfaction were acceptable. Moreover, the preoperative and postoperative Qmax were similar although postoperative PVR increased significantly compared to the preoperative PVR.

### Concluding message

These results show that preoperative detrusor underactivity in patients with SUI may not influence to the postoperative continence rates and patient satisfaction. However, Midurethral sling can be done carefully for the patients with SUI and detrusor underactivity; moreover, the evaluation of preoperative detrusor function is important since the therapeutic outcome and postoperative voiding pattern may be affected by detrusor underactivity.

### References

1. Scand J Urol Nephrol 2007; 41: 138-43
2. Int J Urol 2004; 11: 88-96

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<b>Is this a clinical trial?</b>	<b>No</b>
<b>What were the subjects in the study?</b>	<b>HUMAN</b>
<b>Was this study approved by an ethics committee?</b>	<b>No</b>
<b>This study did not require ethics committee approval because</b>	<b>This is retrospective study with chart review</b>
<b>Was the Declaration of Helsinki followed?</b>	<b>Yes</b>
<b>Was informed consent obtained from the patients?</b>	<b>No</b>