

EFFECT OF PREOPERATIVE VOIDING DYSFUNCTION ON VOIDING TRIAL AFTER MIDURETHRAL SLING PROCEDURE IN WOMEN WITH STRESS URINARY INCONTINENCE

Hypothesis / aims of study

Rarely has voiding dysfunction (VD) been closely examined with regard to voiding pattern after sling procedure. The aim of this study was to elucidate whether VD may have an impact on voiding trial after midurethral sling (MUS) procedure in women with stress urinary incontinence (SUI).

Study design, materials and methods

168 women with SUI who had undergone a MUS procedure between June 2010 and June 2012 were retrospectively analyzed. The subjects were divided into 2 groups according to the presence of VD by preoperative uroflowmetry. We defined VD to including at least one of maximal flow rate under 15ml/sec, or postvoid residual urine volume (PVR) more than 50ml. Uroflowmetry was followed up postoperatively. Failure of voiding trial was defined as PVR more than 100ml at voiding trial. Surgical results, postoperative uroflowmetry parameters were compared.

Results

Preoperatively, 48 patients had VD. Although VD group showed significantly lower maximal flow rate in all of postoperative uroflowmetry at discharge day, postoperative 14th day, 3rd, 12th month, there were no significant differences in the rate of failure of voiding trial or in the rate of performing CIC after MUS procedure between the two groups. In VD group, 31 patients had bladder outlet obstruction (BOO) and 17 had detrusor underactivity (DU). There were no significant differences in the rates of voiding trial failure, performing clean intermittent catheterization, or surgical success after MUS procedure between BOO and DU group.

Interpretation of results

Obstructive effects on voiding after urethral sling procedure have been reported, and the effect may become prominent in women with VD. This study showed that those with preoperative VD, either with BOO or DU, experienced no definite unfavorable therapeutic outcome of MUS procedure compared to those with normal voiding function.

Concluding message

MUS may be regarded as safe, successful procedure not only in women with SUI and normal voiding function, but also in those with SUI and VD.

Table 1. Comparison of voiding parameters of women with SUI according to the presence or absence of voiding dysfunction by preoperative uroflowmetry.

Parameter	Voiding dysfunction		p-value
	Present (n=48)	Absent (n=120)	
Age (yr)	59.3±9.9	57.2±34.7	0.689
Preoperative Uroflowmetry			
Qmax (ml/s)	12.2±4.9	26.3±8.1	<0.001*
Voided volume (ml)	183.2±73.8	237.2±113.5	0.003*
PVR (ml)	24.7±45.5	14.1±12.1	0.121
Preoperative Urodynamic parameters			
Pdetmax in filling cystometry (cmH ₂ O)	9.6±2.0	9.5±3.1	0.865
Maximal bladder capacity (ml)	298.9±68.0	293.0±86.5	0.670
Compliance	29.9±6.8	29.3±8.6	0.666
PdetQmax (cmH ₂ O)	18.0±9.0	20.0±15.4	0.394
Pdetmax (cmH ₂ O)	28.3±18.0	32.1±20.1	0.257
VLPP (cmH ₂ O)	58.3±25.5	51.7±26.5	0.154
Postoperative voiding trial at discharge day			
CIC (%)	13 (27.1%)	20 (16.7%)	0.125
Failure of voiding trial (%)	15 (31.2%)	27 (22.5%)	0.254
Qmax (ml/s)	17.1±9.3	24.4±11.7	<0.001*
PVR (ml)	95.4±111.6	76.1±88.9	0.252
Voiding trial at postoperative 14th day			
Failure of voiding trial (%)	2 (4.1%)	2 (1.6%)	0.337
Qmax (ml/s)	16.9±9.4	22.3±9.9	0.001*
PVR (ml)	20.3±25.5	21.5±22.4	0.767
Voiding trial at postoperative 3rd month			
Failure of voiding trial (%)	1 (2.1%)	0 (0%)	0.100
Qmax (ml/s)	13.7±6.6	22.1±9.2	<0.001*
PVR (ml)	17.3±28.5	20.3±16.4	0.482
Voiding trial at postoperative 12th month			
Failure of voiding trial (%)	1 (2.1%)	0 (0%)	0.106
Qmax (ml/s)	12.4±7.7	21.2±7.8	<0.001*
PVR (ml)	17.2±27.0	19.3±20.3	0.789
Continence (%)	47 (97.9%)	115 (95.8%)	0.500

Qmax: maximal urine flow rate; PVR: postvoid residual urine volume; Pdetmax: maximal detrusor pressure; PdetQmax: detrusor pressure at maximal urine flow rate; VLPP: valsalva leak point pressure; CIC: clean intermittent catheterization

Disclosures

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