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POINT OF BA IS THE FACTOR ASSOCIATED WITH PREOPERATIVE VOIDING DYSFUNCTION IN PATIENTS WITH CYSTOCELE

Hypothesis / aims of study

It has been hypothesized that women with significant pelvic organ prolapse (POP), particularly of the anterior vaginal wall, may have voiding dysfunction. Rarely has voiding dysfunction been closely examined for different compartments of the vagina. This study attempts to further elucidate the effects of POP and repair of POP on voiding function.

Study design, materials and methods

The clinical records of 64 women who underwent cystocele (>POP-Q stage III) repair (prolift, Johnson and Johnson) with concomitant mid urethral sling between December 2008, and December 2011 were reviewed. Preoperatively, stress test and urodynamic study were performed with prolapse reduction and a Pelvic Organ Prolapse Quantification (POP-Q) examination was done. The subjects were divided into 2 groups according to the presence of voiding dysfunction (VD) by preoperative uroflowmetry and urodynamic study. We defined voiding dysfunction to including at least one of the following three criteria: maximal flow rate under 15ml/sec, or postvoid residual urine volume (PVR) more than 50ml, or showing straining pattern on uroflowmetry. Uroflowmetry was followed up at the day of discharge, postoperative 14th day, 3rd, 12th month. Age, parity, each uroflowmetry and urodynamic parameters were compared between the two groups.

Results

Of 64 women, 34 patients (53%) had voiding dysfunction, preoperatively. In VD group, 12 patients (35%) had detrusor underactivity and 22 patients (65%) had bladder outlet obstruction. In VD group, failure of postoperative voiding trial was more frequent (12 of 34 vs. 4 of 30, p=0.040), with lower maximal flow rate (p=0.007) and higher PVR (p=0.034). There was no difference in the rate of failure of voiding trial between detrusor underactivity group and bladder outlet obstruction group. POP-Q stage was significantly higher (p=0.008), and points of Aa, Ba was significantly positively longer (p=0.005, p=0.006, respectively).

Interpretation of results

Patients with VD preoperatively showed higher rate of failure of voiding trial postoperatively. Also POP-Q stage with point of Aa and Ba were the factors associated with presence of preoperative voiding dysfunction.

Concluding message

The prevalence of voiding dysfunction in patients with cystocele is high (%) and maybe originated from either bladder outlet obstruction or detrusor underactivity. And as point of Aa, Ba with POP-Q stage were factors associated voiding dysfunction in patients with cystocele, early repair of cytocele must be considered.

Table 1. Baseline demographic and clinical data of women with cystocele according to the presence or absence of voiding dysfunction by preoperative uroflowmetry.

Parameter	Voiding dysfunction		p-value
	Present (n=34)	Absent (n=30)	
Age (yr)	65.6±8.8	64.3±10.1	0.585
Vaginal delivery	3.7±1.5	3.4±1.4	0.458
Body mass index (%)	24.5±3.1	24.2±3.2	0.716
SUI grade			
1 (%)	24 (70.6)	14 (46.7)	0.184
2 (%)	10 (29.4)	16 (53.3)	
3 (%)	0 (0)	0 (0)	
Qmax (ml/s)	15.1±9.0	23.5±9.4	**0.001**
PVR (ml)	53.0±43.7	18.0±10.3	**0.000**
PdetQmax (cmH_2O)	17.4±8.8	15.7±8.7	0.452
Pdetmax (cmH_2O)	23.6±9.5	21.5±9.2	0.367
VLPP (cmH2O)	63.6±25.8	66.3±32.7	0.760
POPQ stage			
3 (%)	20 (58.8)	27 (90)	**0.018**
4 (%)	14 (41.2)	3 (10)	
Aa (cm)	2.4±0.7	1.2±1.5	**0.005**
Ba (cm)	2.7±1.3	1.2±1.7	**0.006**
TVL (cm)	3.7±0.9	6.0±0.4	0.101
C (cm)	-0.6±3.7	-2.8±3.9	0.117
D (cm)	-2.1±2.6	-4.1±3.1	0.084

Ap (cm)	-2.1±1.1	-1.9±1.9	0.670
Bp (cm)	-2.0±1.3	-2.3±1.4	0.605
Post operative voiding trial			
Success (%)	22 (64.7)	26 (86.7)	**0.040**
Fail (%)	12 (35.3)	4 (13.3)	
Qmax (ml/s) at discharge day	14.1±6.5	21.4±9.0	**0.007**
PVR (ml) at discharge day	100.1±98.8	56.5±52.9	**0.034**
Qmax (ml/s) at postoperative 14th day	17.5±8.0	24.5±13.0	**0.036**
PVR (ml) at postoperative 14th day	41.3±33.0	24.0±22.8	**0.046**
Qmax (ml/s) at postoperative 3rd month	18.7±10.0	20.3±9.5	0.584
PVR (ml) at postoperative 3rd month	45.5±49.8	24.0±16.4	0.060
Qmax (ml/s) at postoperative 12th month	12.9±8.0	18.9±10.5	0.396
PVR (ml) at postoperative 12th month	37.5±48.6	11.3±2.5	0.359

Disclosures
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