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CHANGES OF PAD WEIGHT RESULTS AND URETHRAL PRESSURE PROFILES AFTER REDUCTION OF CYSTOCELE BY VAGINAL GAUZE PACKING

Hypothesis / aims of study

To investigate the changes of pad weight results and urethral pressure profiles before versus after reduction of cystocele by vaginal gauze packing.

Study design, materials and methods

Between July 2005 and December 2010, all consecutive women with ≥ stage II symptomatic cystocele who visited the urogynecologic outpatient clinics of Department of Obstetrics and Gynecology of a medical center for treatment were enrolled in this study. Medical records and urodynamic data were reviewed retrospectively.

All patients were asked to undergo 20-minute pad test [1] and stress urethral pressure profile test before and after vaginal packing with 1 to 2 pieces of gauze.

Results

One hundred and forty women were enrolled (Table 1). A decrease in pad weight and increases of pressure transmission ratio near the middle point of functional profile length, functional profile length, urethral closure pressure area and continence area were found near the middle point of functional profile length (Table 2).

Thirty-four (49.3%) of continent patients (pad weight test ≤1 gm) became incontinence (>1gm) after vaginal gauze packing, and 8 (11.2%) of incontinent patients (>1gm) became continent after packing (≤1 gm). Nonetheless, only nine (8.5%) of without severe incontinence (≤10 gm) became severe incontinence (>10 gm) after packing, and eight (32%) with severe incontinence (>10 gm) before packing became less severe after packing (≤10 gm) (Table 3).

However, The pad weight before reduction correlated significantly with diabetes (Spearman's rho =0.18, P = 0.04); however, it did not correlate with age, parity, stage of cystocele and previous hysterectomy, and the pad weight after reduction did not correlate with age, parity, stage of cystocele, diabetes and previous hysterectomy. Besides, the difference of pad weights between before and after vaginal packing did not correlate with age, parity, stage of cystocele, diabetes or previous hysterectomy. Nonetheless, the pad weights before and after reduction were highly correlated (*Spearman's rho = 0.59, P < 0.001; Figure 1).

Interpretation of results

The aim of vaginal packing is to unmask the occult urodynamic stress incontinence; however, we found that vaginal packing significantly improved severity of incontinence. Compression of the bladder neck and urethra by the packed gauze may explain the finding of our study. Therefore, vaginal packing to reduce cystocele may be not a good method for discovering occult incontinence.

Concluding message

Vaginal packing for reduction of cystocele might improve incontinence severity, and may be not a good method for discovering concomitant occult urodynamic stress incontinence.

Table 1. Clinical characteristics of women with cystocele

Variables	N = 140 (%)
Age	64.0±10.1
Parity	3.6±1.7
Stage of cystocele	
2	66 (47.2)
3	58 (41.4)
4	16 (11.4)
Diabetes	13 (9.3)
Previous hysterectomy	24 (17.1)

* Values were expressed as mean ± standard deviation or number.

Table 2. Comparisons of urethral pressure profiles and pad weight results before and after reduction of cystocele by vaginal packing

Variables	Before reduction	After reduction	P*
Pad weight (gm)	11.7±28.7	11.6±30.3	<0.001
PTR25 (%)	95.7±46.2	100.8±45.1	0.07
PTR50 (%)	89.4±43.6	99.7±44.4	0.03
PTR75 (%)	88.9±52.6	94.5±48.5	0.09
MUP (cmH_2O)	101.4±39.2	102.2±34.7	0.21

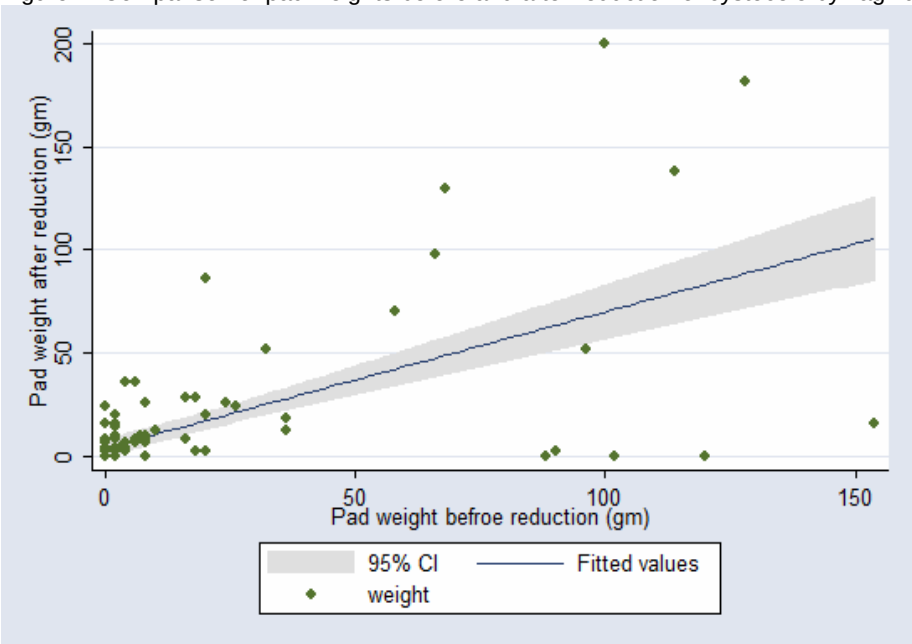
MUCP(cmH_2O)	67.2±40.5	70.1±35.2	0.053
FPL (cm)	2.6±1.1	3.0±1.1	0.009
CL (cm)	1.5±0.9	1.7±1.0	0.11
UCPA ($cm.cmH_2O$)	77.0±68.2	94.4±62.8	<0.001
CA ($cm.cmH_2O$)	43.9±39.1	55.1±43.8	<0.001

1. *By Wilcoxon signed-rank test.
2. Values were expressed as mean ± standard deviation.
2. CA: continence area; CL: continence length; FPL: functional profile length; MUCP: maximal urethral closure pressure; MUP: maximal urethral pressure; PTR: pressure transmission ratio; PTR25: PTR near the proximal point of 25% functional profile length; PTR50: PTR near the middle point of functional profile length; PTR75: PTR near the distal point of 25% functional profile length; UCPA: urethral closure pressure area.

Table 3. Comparison of pad weight results before and after cystocele reduction by vaginal packing (n = 140)

		Pad weight after reduction (gm)	
		≤1	>1
Pad weight before reduction (gm)	≤1	35	34
	>1	8	63
		≤10	>10
	≤10	106	9
	>10	8	17

Figure 1. Comparison of pad weights before and after reduction of cystocele by vaginal packing



References
1. Wu WY, Sheu BC, Lin HH. Comparison of 20-minute pad test versus 1-hour pad test in women with stress urinary incontinence. Urology 2006;68:764–768.

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What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**National Taiwan University Hospital Research Ethics Committee**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**No**