

CLINICAL OUTCOMES OF TRANSVAGINAL MESH PROCEDURES FOR CYSTOCELE REPAIR: COMPARISONS OF UPHOLD AND PERIGEE SYSTEMS

Hypothesis / aims of study

Several transvaginal mesh procedures, such as Uphold system (Boston Scientific) and Perigee system (American Medical Systems Inc), have been used for cystocele repair. Perigee system is a trans-obturator four-arm mesh device attached to proximal and distal arcus tendineus fasciae pelvis. Nonetheless, Uphold system, is a single incised, two-arm anterior sacrospinous mesh fixation system. Both systems can be used for cystocele repair, despite Uphold system can be used for concomitant repair of apical prolapse. The aim of this study was to compare the clinical outcomes of Uphold system and Perigee system in treating women with cystocele.

Study design, materials and methods

Medical records of all female patients with >stage II cystocele, who underwent surgeries either with the Perigee system or Uphold system between January 2011 and February 2017 in a medical center, were reviewed. Wilcoxon ranksum test, chi-square test or Fisher's exact test were used to compare these two systems in perioperative parameters and postoperative outcomes.

Results

A total of 113 women were enrolled in this study, including 46 patients underwent operation with Uphold system and 67 patients received operation with Perigee system. Except a higher rate of >stage II uterine prolapse in the Uphold group ($p=0.005$), there were no between-group differences in the other baseline characteristics (Table 1).

There was no significant between-group difference in the mean operative time. However, a larger amount of intra-operative blood loss was found in the Uphold group (190 ± 184 ml vs. 101 ± 105 ml, $p=0.002$), compared with the Perigee group (Table 1).

There was no between-group significant difference in intra-operative and post-operative complications (Table 1 and 2). In addition, POP recurrence rate and post-operative low urinary tract symptoms did not differ between these two groups (Table 2).

Interpretation of results

Both Uphold and Perigee systems seemed to have similar clinical efficacy and complication rates. Both groups were similar in operative time. However, a significant larger amount of intra-operative blood loss was found in the Uphold group, and surgical exploration of the space around the sacrospinous ligaments might account for the difference in blood loss. Thus, the above findings may hint that both trans-obturator mesh fixation system and sacrospinous ligament mesh fixation system might achieve similar clinical outcomes for cystocele repair.

Concluding message

Uphold and Perigee systems had similar clinical outcomes for cystocele repair, despite a larger amount of intra-operative blood loss was found in the Uphold group.

Table 1. Baseline and peri-operative data of women who underwent cystocele repair with the Uphold system or the Perigee system (n=113)

Variables	Uphold (n=46)	Perigee (n=67)	†P
Age (years)	64.4±9.8	64.1±8.0	0.72
Body mass index (kg/m ²)	25.2±3.5	25.0±3.0	0.82
Menopause	40 (87)	64 (96)	0.16
Parity	3.3±1.5	3.1±1.2	0.22
Diabetes	14 (30)	15 (22)	0.38
Hypertension	24 (52)	41 (61)	0.44
Prior hysterectomy	7 (15)	10 (16)	0.94
Prior POP surgery	4 (9)	5 (7)	1.00
>stage II cystocele	46 (100)	67 (100)	1.00
>stage II uterine prolapse	42 (91)	46 (69)	0.005
>stage II rectocele	28 (61)	29 (43)	0.09
Low urinary tract symptoms			
Stress urinary incontinence	17 (37)	25 (37)	1.00
Overactive bladder	11 (24)	13 (19)	0.64
Voiding dysfunction	5 (11)	15 (22)	0.14
Concomitant surgeries			
Vaginal total hysterectomy	14 (30)	29 (43)	0.24
Mid-urethral sling	2 (4)	7 (10)	0.31
Posterior colporrhaphy	34 (74)	36 (54)	0.03
Operative time (mins)	119±36	108±39	0.17
Blood loss (mL)	190±184	101±105	0.002
Bladder perforation	1 (2)	0 (0)	0.41
Massive blood loss needed transfusion	1 (2)	0 (0)	0.41
Follow-up interval (weeks)	16.7±16.2	41.5±54.9	0.005

Values are expressed as number (percentage) or mean ± standard deviation.

†Wilcoxon ranksum test, chi-square test or Fisher's exact test.

Table 2. Postoperative outcome of women who underwent cystocele repair with the Uphold system or the Perigee system (n=113)

Variables	Uphold (n=46)	Perigee (n=67)	†P
Recurrence of cystocele	1 (2)	4 (6)	0.65
Mesh extrusion	4 (9)	5 (7)	1.00
Dysuria/urinary tract infection	1 (2)	7 (10)	0.14
Recto-vaginal fistula	0 (0)	1 (1)	1.00
De novo constipation	0 (0)	1 (1)	1.00
De novo dyspareunia	0 (0)	1 (1)	1.00
Postoperative low urinary tract symptoms			
Stress urinary incontinence	9 (20)	13 (19)	1.00
Overactive bladder	1 (2)	8 (12)	0.08
Voiding dysfunction	3 (7)	1 (1)	0.30

Values are expressed as number (percentage) or mean ± standard deviation.

†Wilcoxon ranksum test, chi-square test or Fisher's exact test.

Disclosures

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