

SHORT-TERM OUTCOMES AFTER SINGLE-INCISION TRANSVAGINAL MESH WITH AND WITHOUT CONCOMITANT MIDURETHRAL SLING IN PELVIC ORGAN PROLAPSE

Hypothesis / aims of study

The purpose of this study was to report the short term outcomes of pelvic reconstructive surgery with single-incision transvaginal mesh (Elevate[®]) with and without concomitant midurethral sling (MiniArc[®]) in pelvic organ prolapse women.

Study design, materials and methods

Patients with POP-Q stage II-IV who underwent transvaginal pelvic reconstructive surgery with Elevate[®] device between November 2010 and June 2013 were reviewed. The women were grouped into receive (group A) or not receive (group B) concomitant anti-incontinence procedure. Outcomes included subjective urinary symptoms, prolapse symptoms, comparison of preoperative and postoperative urodynamic parameters, complications, reoperation rates and UDI-6 and IIQ-7 questionnaires.

Results

Fifty-one women including 31 had stress urinary incontinence (SUI) and 20 had occult stress urinary incontinence (OSUI) were assessed in group A, the mean age of the women was 64.5±9.4 years and mean parity was 3.5 (range, 2-7). During the follow-up (0.4 to 32 months), there were 2 cases (3.9%) had de novo SUI, 9 cases (17.7%) had de novo OAB, no one had de novo urine retention and sling release. 145 women including 11 had SUI and 34 had OSUI were assessed in group B, the mean age of the women was 65.9±10.1 years and mean parity was 3.5 (range, 0-9). During the follow-up (0.3 to 34 months), there were 44 cases (30.3%) had de novo SUI, 20 cases (13.8%) had de novo OAB, 5 cases (3.5%) had transient urine retention and 5 cases underwent additional anti-SUI surgery. Only one case had postoperative bleeding in each group, one case had tiny mesh protrusion in each group. There were no life-threatening complications. The anatomical recurrence (POP-Q stage ≥2) rate were 3.92 % in group A and 2.76% in group B. There were no significant differences of postoperative urodynamic parameters between the two groups. Pelvic symptoms and quality of life evaluated by UDI-7 and IIQ-7 showed significantly improved after surgery in each group.

Table 1. Effects of type of surgery on urinary symptoms

	With MUS, N =51	Without MUS, N=145
Preoperative		
- SUI	31(60.8%)	11(7.6%)
- OSUI	20(39.2%)	35(24.1%)
- No SUI	0(0%)	99(68.3%)
De novo		
- SUI	2(2/20 10%)	44(44/134 32.8%)
- OAB	9(17.7%)	20(13.8%)
Persistent UI	7(7/31 22.6%)	4(4/11 36.4%)
Postoperative UR	0(0%)	5(3.5%)
Reoperation		
- MUS	-	5(3.4%)
- Sling release	0(0%)	-

Table 2. Preoperative and postoperative urodynamic data for with and without MUS groups

	With MUS, N =51			Without MUS, N =145			Post-op P value
	Preoperative	Postoperative	P-value	Preoperative	Postoperative	P-value	
Free uroflowmetry							
Voided volume (ml)	327.25±211.34	337.28±114.77	0.781	248.56±183.72	310.65±147.43	0.006*	0.305
Qmax (ml/s)	24.04±13.12	27.28±12.89	0.272	19.35±12.38	24.51±9.72	0.001*	0.276
Residual urine (ml)	92.29±105.05	42.00±96.60	0.029*	101.67±93.08	34.87±42.08	<0.001*	0.689
First desire (ml)	160.84±49.61	138.32±38.38	0.024*	168.85±59.33	147.02±52.08	0.005*	0.333
MCC (ml)	361.53±88.23	329.00±85.72	0.104	366.25±94.11	335.92±94.40	0.022*	0.710
PdetQmax (cmH ₂ O)	32.00±19.48	28.83±19.44	0.053	38.46±19.91	27.72±14.84	<0.001*	0.697
MUCP (cmH ₂ O)	62.76±32.79	51.20±19.44	0.053	64.77±37.40	56.05±28.16	0.054	0.305
Functional length (cm)	28.96±10.79	36.33±50.36	0.435	28.71±9.08	26.56±8.12	0.073	0.299

Table 3. UDI-6 and IIQ-7 scores before and after surgery for with and without MUS groups

	With MUS, N = 51			Without MUS, N = 145		
	Preoperative	Postoperative	P-value	Preoperative	Postoperative	P-value
UDI-6	6.10±3.34	2.40±2.97	<0.001*	6.15±3.68	2.15±2.30	<0.001*
IIQ-7	6.28±4.19	1.48±2.71	<0.001*	6.39±4.08	1.06±2.58	<0.001*

Interpretation of results

Postoperative SUI is less frequent after combining surgery relative to prolapse surgery only. The incidence of de novo SUI was higher in women with pelvic reconstruction surgery alone, we should inform the patients about the possibility of two-stage anti-incontinence surgery. The concomitant midurethral sling procedure was a safe choice in selected women with SUI and OSUI.

Concluding message

These results suggest that individualized selection of Elevate® system with and without concomitant midurethral sling (MiniArc®) in pelvic organ prolapse women is a safe and effective treatment in the short term follow up. The incidence of de novo SUI was higher in women with pelvic reconstruction surgery alone, we should inform the patients about the possibility of two-stage anti-incontinence surgery. The concomitant midurethral sling procedure (MiniArc®) was a safe choice in selected women with SUI and OSUI.

Disclosures

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