

Lower urinary tract function improve after laparoscopic sacrocolpopexy in elderly patients with pelvic organ prolapse

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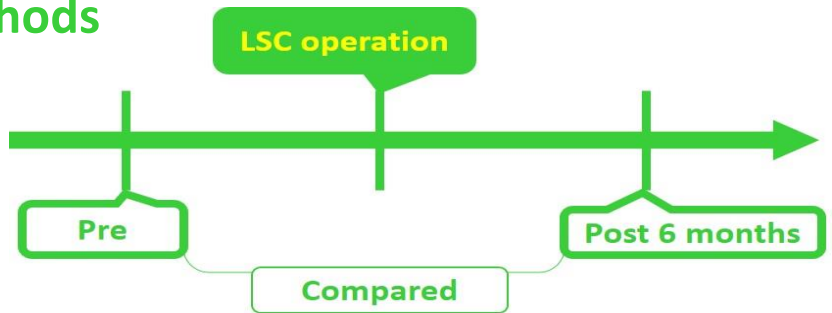
Introduction

The number of people aged 65 and over has increased rapidly from epidemiological data. The prevalence of pelvic organ prolapse (POP) increases in the elderly. Since the U.S. Food and Drug Administration warning about mesh-related complications following transvaginal mesh surgery for POP, an abdominal approach such as sacrocolpopexy has become popular for the treatment of POP. Several studies have shown that laparoscopic sacrocolpopexy (LSC) is an effective procedure with the benefit of being less invasive. However, these reports were mainly focused on the vaginal functional results, postoperative complications or surgical failure.

Objectives

The aim of the present study is to assess lower urinary tract function before and after LSC for POP patients regardless of age.

Methods



Characteristics of all patients (n=50)



Variable	<65 years age group		≥65 years age group	
	Value		Value	
No. of patients	12		38	
Age (years), median (range)	61.5 (50-64)		68.5 (65-88)	
BMI (kg/m ²), mean ± SD	23.6 ± 3.7		24.5 ± 2.9	
Parity (n)				
1	2		3	
2	7		25	
3	1		9	
4	1		1	
unknown	1		-	
Stage of POP (n)				
1	-		-	
2	3		10	
3	9		26	
4	-		2	

(BMI : Body Mass Index)

UDS parameters

- Urethral function**
- functional profile length (FPL)
 - maximum urethral closure pressure (MUCP)
- Bladder function**
- normal desire to void (NDV)
 - strong desire to void (SDV)
 - bladder capacity
 - maximum flow rate (Qmax)
 - detrusor pressure at maximum flow (Pdet at Qmax)
 - voided volume (VV)
 - post-void residual volume (PVR)

- Compared pre- and postoperatively with each of the groups
- The urodynamic data were compared by t-test, with P < 0.05 taken to show statistical significance

Results

	<65 years age group			≥65 years age group		
	pre LSC	post LSC	p value	pre LSC	post LSC	p value
Urethral function						
FPL (mm)	26.4 ± 3.8	25.9 ± 3.5	0.563	27.9 ± 4.6	28.0 ± 4.4	0.896
MUCP (cmH ₂ O)	56.8 ± 22.0	57.8 ± 28.0	0.789	43.8 ± 15.3	42.4 ± 12.2	0.427
Bladder function						
NDV (ml)	175.3 ± 98.8	215.0 ± 117.9	0.573	156.0 ± 77.5	194.4 ± 95.3	0.008
SDV (ml)	267.6 ± 142.0	318.1 ± 102.1	0.684	249.6 ± 122.2	287.1 ± 115.2	0.118
capacity (ml)	348.2 ± 145.6	405.0 ± 109.7	0.267	324.2 ± 128.4	364.5 ± 115.8	0.041
Qmax (ml/s)	16.9 ± 7.0	22.1 ± 6.7	0.058	13.7 ± 8.9	20.8 ± 9.7	0.0002
Pdet at Qmax (cmH ₂ O)	31.4 ± 14.7	23.9 ± 9.8	0.055	30.5 ± 14.4	23.9 ± 12.4	0.029
VV (ml)	319.5 ± 163.5	431.5 ± 119.0	0.173	290.7 ± 143.7	398.1 ± 123.2	0.003
PVR (ml)	42.7 ± 44.1	23.1 ± 26.9	0.202	44.5 ± 41.7	20.0 ± 22.8	0.003

Values are mean ± SD of data. *p < 0.05 compared pre- and post LSC.

Discussion

In the present study, the key finding was that bladder function was significantly improved only elderly patients. Preoperative parameters are not difference both 2 groups. Although the mechanism by which bladder function improvement only in elderly patients has remained unclear, we hypothesize that this could be due to some factors, such as the number of complicated disease, or disease duration of POP.

Conclusion

LSC is a valid option in elderly patients with POP from the perspective of lower urinary tract function.