

Perioperative and Functional Outcomes of Abdominal, Robotic and Laparoscopic Sacrocolpo(hystero)pexy for Apical Prolapse: A Multicenter Retrospective Comparative Study

HYPOTHESIS / AIMS OF STUDY: To compare different sacrocolpo(hystero)pexy (SC) methods in terms of success, complications, and perioperative outcomes.

STUDY DESIGN, MATERIALS AND METHODS

- Retrospective
- Multicenter
- Comperative study
- 303 patients with Baden–Walker grade 3 or 4 apical POP identified.
- 228 patients who underwent ASC, RSC, or LSC included.
- Follow up time: 12 months(Median)

Failure criteria:

- presence of BW-G2 or higher prolapse,
- necessity for reoperation or pessary,
- persistant bulge symptoms.

CONCLUDING MESSAGE

The success rates of ASC, RSC and LSC for the surgical management of POP are comperable. The selection of procedure must take into account complication rates, duration of the operation and hospital stay, blood loss, de-novo incontinence, and the surgeon's expertise. Minimally invasive treatments, such as RSC and LSC, provide benefits for surgical duration, length of hospital stay, and estimated blood loss.

Table-1: Baseline Characteristics of the patients

	ASC N:96 (42.1%)	RSC N:81 (35.5%)	LSC N:51 (22.4%)	P value
Age; mean $\pm$ SD	66 $\pm$ 11	68 $\pm$ 7	58 $\pm$ 11	<0.001*
BMI; median IQR,	28 (26-31)	28 (26-30.5)	25 (24-30)	0.01**
Previous Hysterectomy, n (%)	31 (32.3%)	25 (30.9%)	9 (17.6%)	0.286***
Previous MUS, n (%)	12 (12.5%)	3 (3.7%)	4 (7.8%)	0.108***
Previous prolapse surgery, n (%)	17 (17.7%)	17 (21%)	9 (17.6%)	0.83***

*one-way ANOVA, **kruskal wallis, ***chi-square

Table-2. Peroperative clinical characteristics of the patients

	ASC N:96 (42.1%)	RSC N:81 (35.5%)	LSC N:51 (22.4%)	P value
Operation time (minutes); median IQR	150 (120-177)	120 (100-130)	90 (60-120)	<0.001**
Hospital stay (days); median IQR	4 (2-5)	3 (2-5)	2 (2-2)	0.003**
De Novo Incontinence, n(%)				0.766*
• None	92 (95.8%)	77 (95.1%)	49 (96.2%)	
• Stress	4 (4.2%)	3 (3.7%)	1 (1.9%)	
• Urge	0	1 (1.2%)	1 (1.9%)	
Success, n (%)	88 (91.7%)	75 (92.6%)	45 (88.2%)	0.676*

*chi-square **kruskal wallis

Table-3: Complications

	ASC N:96 (42.1%)	RSC N:81 (35.5%)	LSC N:51 (22.4%)	P value
Estimated Blood Loss (ml); median IQR	130 (100-160)	120 (100-130)	50 (50-100)	<0.001*
Clavien-Dindo Grade-1, n (%)				0.739**
• Pain requiring morphine	3 (3.1%)	3 (3.7%)	1 (1.9%)	
• Fever	2 (2.1%)	0	1 (1.9%)	
Clavien-Dindo Grade-2, n (%)				0.714**
• Intraop blood transfusion	0	1 (1.2%)	0	
• Postop blood transfusion	1 (1.1%)	1 (1.2%)	1 (1.9%)	
• Urinary tract infection	0	1 (1.2%)	1 (1.9%)	
Clavien-Dindo Grade-3, n (%)				0.139**
• Bladder injury	2 (2.1%)	0	1 (1.9%)	
• Bowel/rectal injury	0	0	1 (1.9%)	
• Mesh complications	0	2 (2.5%)	0	
• Ureteral injury	0	0	1 (1.9%)	

*kruskal wallis

**chi-square

Table-4: Subgroup analyses according to Age and BMI
A. Comparison between groups

	ASC N:96 (42.1%)	RSC N:81 (35.5%)	LSC N:51 (22.4%)	P value
Success, Overall, n (%)	88 (91.7%)	75 (92.6%)	45 (88.2%)	0.676*
<65 years (n=150)	34/38 (89.5%)	26/27 (96.3%)	31/36 (86.1%)	0.402*
≥ 65 years (n=153)	54/58 (93.1%)	49/54 (90.7%)	14/15 (93.3%)	0.883*
BMI <30 (n=186)	57/61 (93.4%)	47/51 (92.2%)	30/34 (88.2%)	0.671*
BMI ≥ 30 (n=117)	31/35 (88.6%)	28/30 (93.3%)	15/17 (88.2%)	0.773*

B. Comparison within the group regarding age

Age-related success (within group)	< 65 years (n=150)	≥ 65 years (n=153)	P value
Open Sacrocolpo(hystero)peky N:96	34/38 (89.5%)	54/58 (93.1%)	0.393**
Robotic Sacrocolpo(hystero)peky N:81	26/27 (96.3%)	49/54 (90.7%)	0.343**
Lap. Sacrocolpo(hystero)peky N:51	31/36 (86.1%)	14/15 (93.3%)	0.422**

C. Comparison within the group regarding BMI

BMI-related success (within group)	BMI <30 (n=186)	BMI ≥ 30 (n=117)	P value
Open Sacrocolpo(hystero)peky N:96	57/61 (93.4%)	31/35 (88.6%)	0.32**
Robotic Sacrocolpo(hystero)peky N:81	47/51 (92.2%)	28/30 (93.3%)	0.608**
Lap. Sacrocolpo(hystero)peky N:51	30/34 (88.2%)	15/17 (88.2%)	0.663**

*Chi-square **Fisher exact test

ASC is an effective approach for treating apical prolapse; however, if RSC and LSC are available, these procedures should be prioritized.

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