

# Laparoscopic and Robotic Sacrocervicopexy with Subtotal Hysterectomy for Management Of Uterine Prolapse

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## Introduction

Sacrocerivopexy (SCxP) has gained popularity as a surgical choice to address the apical support in younger women. The procedure is performed in a similar way to sacral colpopexy following a subtotal hysterectomy (STH). Several reports have demonstrated a lower risk of apical mesh exposure by retaining the cervix with STH and SCxP compared to a total hysterectomy with concomitant sacral coploexy. This aim of this study was to describe the surgical technique for SCxP with STH, and report the objective and subjective outcomes.

## Aims

To describe the surgical technique for SCxP with STH, and report the objective and subjective outcomes.

## Methodology

Patients who underwent laparoscopic and robotic SCxP with STH between September 2014 and June 2016 was prospectively analyzed. STH was performed using a combination of Ligasure and monopolar loop diathermy to amputate the uterus at the cervico-uterine isthmus and power morcellation to remove the uterus. After reflecting the bladder and rectal off the vagina, a Y-shaped mesh arms were attached to anterior and posterior vaginal walls, incorporating the cervix and anchored to the anterior longitudinal ligament of the sacral promontory with sutures. Trans-vaginal native tissue repair and mid- urethral sling were performed as required. Subjects were assessed at baseline, 4 weeks,6 months and 12 months. Pelvic Organ Prolapse Quantification (POP-Q) exam was performed and Pelvic Floor Distress Inventory Questionnaires (PFDI-20), Pelvic Organ Prolapse/ Urinary Incontinence Sexual Questionnaires (PISQ-12) and Euro-Qol Health Questionnaires (EQ-5D) were administered at baseline and at a mean of 12.2 months.

## Results

Eighty subjects (62 laparoscopic, 18 robotic) underwent SCxP with STH with 66 (83%) returning for follow-up. Of the 66 patients that were analyzed, 46 (70%) have completed the questionnaires. The median age was 55 years (range 33-73) and median follow-up was 8 months (range 6-18). Fifteen patients (23%) had concurrent anterior and posterior colporrhaphy, 6% and 50% had anterior and posterior colporrhaphy alone respectively, and 21% did not require any vaginal repair. Forty-two percent of patients required a mid-urethral sling.

## Results

**Table 1: Objective outcomes of laparoscopic & robotic SCxP with STH**

POP-Q	Preop		Postop		Change	
	Mean	Range	Mean	Range	Mean	Range
Aa	0.9	-2 to +3	-2.1	-3 to 0	-3.2	-5 to 0
Ba	1.1	-2 to +4	-2.1	-3 to 0	-3.5	-8 to 0
C	-1.4	-7 to +8	-8.4	-9 to -6	-7.5	-16 to -1
Ap	0.4	-3 to +3	-2.6	-3 to 0	-3.0	-6 to 0
Bp	0.4	-3 to +3	-2.6	-3 to 0	-3.2	-10 to 0
D	-2.5	-7 to +7	-8.5	-9 to -7	-6.4	-15 to -1

*Note: Negative change in score indicates objective improvement in prolapse for the respective compartment*

**Table 2: Subjective outcomes of laparoscopic & robotic SCxP with STH**

Tools	Preop			Postop			Change		
	Mean	Median	Range	Mean	Median	Range	Mean	Median	Range
PFDI-20	116.3	117.6	4.16 to 232.3	35.7	17.7	0 to 139.6	-80.7	-73.9	-222.9 to 53.1
PISQ-12	25	30	0 to 44	28	35	0 to 46	3	2.5	-30 to 34
EQ-5D	74	80	40 to 100	88	90	60 to 100	14	10	-20 to 50

*Note:  
A reduction in PFDI-20 score indicates subjective improvement in prolapse, bowel and bladder symptoms.  
A positive change in PISQ-12 and EQ-5D score indicates subjective improvement in sexual function and quality of life.*

## Conclusions

Laparoscopic or robotic sacrocervicopexy with subtotal hysterectomy is a safe and effective procedure for management of uterovaginal prolapse. This approach to the management of advanced uterovaginal prolapse takes advantage of the known higher success rate of post-hysterectomy vault prolapse when compared to trans-vaginal surgery.

Overall success was 94% based on the primary composite outcomes. There was no objective evidence of recurrence apical (cervical) prolapse throughout the follow-up period (Table 1). Four patients experienced vaginal bulge symptoms. One woman required an anterior and posterior colporrhaphy and the other an anterior colporrhaphy during follow-up. Neither participant had a trans-vaginal repair at the index surgery.

Subjective improvements in prolapse symptoms, sexual function and quality of life were observed at follow-up compared to baseline (Table 2). Women who underwent SCxP with STH have demonstrated improvement in both objective and subjective outcomes. This surgery has a short-term high success rate with minimal complications. The only case of mesh exposure was likely related to inadvertent colpotomy event during surgery and the 2 cases of bladder injury occurred during bladder dissection.