

## OUTCOME OF LAPAROSCOPIC SACROCOLPOPEXY AND LAPAROSCOPIC HYSTEROCOLPOSACROPEXY

### Hypothesis / aims of study

Laparoscopic sacrocolpopexy has been one of the treatment options for vaginal vault prolapse. Its role in prophylactic treatment in women with uterine prolapse is uncertain. Another option for women requesting uterine preservation is laparoscopic hysterocolposacropexy. This study aims at evaluating the peri-operative and short term outcome of these operations

### Study design, materials and methods

This is an analysis of a prospectively collected database. Demographic data, symptoms of pelvic floor disorders, POPQ findings were collected when women first attended the clinic. Urodynamic studies, with reduction of prolapse, were performed for all women before pelvic floor repair (PFR) surgery. Generally, laparoscopic sacrocolpopexy (Lap SC) was offered to woman with vaginal vault prolapse. In woman with stage III/IV uterine prolapse, aged <65 and sexually active, option of vaginal hysterectomy with concomitant laparoscopic sacrocolpopexy (VH+LapSC) was offered. In 2012, laparoscopic hysterocolposacropexy (Lap HSC) was offered if women requested for uterine preservation. Concomitant continence surgery would be performed if women were diagnosed urodynamic stress incontinence. Operative and peri-operative information were collected. After surgery, women were followed-up in 3-4 months and then annually. Symptoms of prolapse and urinary incontinence, and subjective satisfaction on the surgery were asked; POPQ assessment for recurrence was performed during the follow-up. Recurrence of prolapse was defined as recurrence of  $\geq$  stage II prolapse. If a woman had received operation for the recurrence, the latest findings before that surgery were regarded as the outcome of that woman. Ethics approval was obtained from local institute.

### Results

In all, from 2005 till the time of this report, 88 women had received one of the three types of surgery. Their characteristics, peri-operative information and complications were listed in table 1. There were low peri-operative complication rates. Five women had the operation done within 3-4 months and no follow-up data was available. For the remaining, there was significant improvement in POPQ findings after all 3 types of operations (table 2). Overall, 11% who had Lap SC had anatomical recurrence, but only 6.3% were symptomatic and 4.8% had re-operation. The overall patient's satisfaction rate for all three operations was good.

### Interpretation of results

There were low peri-operative complications for Lap SC, VH and Lap SC, and Lap HSC. Women had significant anatomical improvement and overall satisfaction after the operation. There was a re-operation rate of 4.8% for Lap SC.

### Concluding message

Lap SC, VH and Lap SC, and Lap HSC are treatment options for women with vaginal vault prolapse or uterine prolapse. There were low peri-operative complications. Women had significant anatomical improvement and overall satisfaction after the operation. However, long term result is needed.

Table 1. Information on the characteristics of the women, operation and the peri-operative outcomes

	All N = 88	Lap SC n = 66	VH+Lap SC n = 16	Lap HSC n = 6
<b>Baseline characteristics</b>				
Age at surgery (years)	62.1 (9.3)	63.2 (7.9)	59.5 (5.2)	41.7 (5.6) <sup>*,**</sup>
No. of vaginal delivery	3.1 (1.4)	3.2 (1.4)	2.5 (0.8)	1.8 (1.0)
Previous PFR surgery	34 (38.6%)	34 (51.5%)	0	0
<b>Current surgery</b>				
Concomitant PFR surgery	80 (90.1%)	59 (89.4%)	16 (100%)	5 (83.3%)
Concomitant continence surgery				
● Colposuspension	7 (7.9%)	7 (10.6%)	1 (6.3%)	0
● TVT	18 (20.5%)	12 (18.2%)	5 (31.3%)	1 (16.7%)
Operative time (min)	211.8 (49.6)	197.9 (51.2)	241.6 (41.8) <sup>*</sup>	212.5 (25.2)
Blood loss (ml)	165.0 (91.2)	150.0 (76.6)	231.3 (81.4) <sup>*</sup>	233.3 (150)
<b>Intra-operative and peri-operative complications and information</b>				
● Bladder injury	3 (3.4%)	3 (5%)	0	0
● Ureteric injury	1 (1.1%)	1 (1.5%)	0	0
● Conversion to laparotomy	1 (1.1%)	1 (1.5%)	0	0
● Deep vein thrombosis	1 (1.1%)	1 (1.5%)	0	0
Hospital stay (days)	3.2 (2.0)	3.2 (2.0)	2.6 (1.1)	2.7 (0.5)

Data are presented in mean (standard deviation) unless specified.

\*P <0.05 vs. Lap SC, \*\*P <0.05 vs VH+Lap SC

Table 2. The POP-Q assessment before and after the operations

FU (month)	Lap SC (n = 63)			VH+Lap SC (n = 14)			Lap HSC (n = 6)		
	38.9 (16.8)			11.3 (9.1)			9.3 (7.3)		
POPQ	Pre	Post	P-value	Pre	Post	P-value	Pre	Post	P-value
Aa	1.0 (1.5)	-1.8 (1.0)	<0.001	2.1 (1.2)	-2.2 (0.7)	<0.001	-0.2 (1.7)	-2.0 (0.9)	0.012
Ba	1.1 (1.9)	-2.1 (1.1)	<0.001	2.8 (1.4)	-2.5 (0.8)	<0.001	-0.3 (2.0)	-2.3 (0.8)	0.018
C	1.7 (2.3)	-5.1 (1.6)	<0.001	4.4 (1.8)	-5.5 (1.1)	<0.001	1.5 (3.0)	-3.3 (2.4)	0.018
gh	3.7 (0.9)	3.1 (0.6)	<0.001	4.3 (0.9)	3.4 (0.5)	0.002	4.3 (0.8)	3.0 (0.5)	0.010
Pb	1.8 (0.4)	2.0 (0.2)	<0.001	2.0 (0.1)	2.1 (0.3)	0.33	1.8 (0.4)	2.0 (0.3)	0.363
TVL	7.6 (1.0)	7.1 (0.7)	0.006	7.8 (0.7)	7.0 (0.5)	0.006	7.8 (0.8)	7.0 (0.5)	0.042
Ap	-0.6 (1.5)	-2.6 (0.9)	<0.001	0.6 (1.4)	-2.4 (0.5)	<0.001	-1.0 (2.0)	-2.5 (0.5)	0.091
Bp	-0.7 (2.3)	-2.4 (0.9)	<0.001	1.0 (2.0)	-3.0 (0.4)	<0.001	1.0 (2.0)	-3.0 (0.4)	0.117
D	-	-	-	3.0 (0.9)	-	-	-0.5 (3.3)	-5.0 (1.7)	0.017

Data are presented in mean (standard deviation).

Pre and Post = assessment before and after the operation respectively.

Table 3. Recurrence of prolapse, re-operation and patient's satisfaction

Stage II recurrence	Lap SC (n = 63)	VH+Lap SC (n = 14)	Lap HSC (n = 6)
Anterior compartment	7 (11.1%)	0	0
Middle compartment	4 (6.3%)	0	1 (16.7%)
Posterior compartment	4 (6.3%)	0	0
Prolapse symptoms	4 (6.3%)	0	1 (16.7%)
Re-operation (PFR surgery)	3 (4.8%)	0	0
Patient's satisfaction	60 (95%)	14 (100%)	6 (100%)

#### Disclosures

**Funding:** Not applicable **Clinical Trial:** No **Subjects:** HUMAN **Ethics Committee:** Joint Chinese University of Hong Kong - New Territories East Cluster Clinical Research Ethics Committee (CRE-2009.257) **Helsinki:** Yes **Informed Consent:** No