

# 628 Comparative study of sacropexy, pectopexy and laparoscopic lateral suspension for the correction of apical pelvic organ prolapse in a serie of 180 cases



Sánchez-Ferrer M, Níguez-Sevilla I, Ruiz-Cotorruelo V, Padilla-Lara F, Lopez-Ortin P, García-Re E

Department of Obstetrics and Gynecology, 'Virgen de la Arrixaca' University Hospital, 30120 Murcia, Spain.

## Hypothesis / aims of study

Laparoscopic sacropexy (SP) is the gold standard technique for the correction of apical prolapse of pelvic organs [1]. However, other easier laparoscopic techniques such as pectopexy (PP) [2] and laparoscopic lateral suspension of Dubuisson (LLS) [3] have become popular.

The aim of this study was to evaluate the baseline characteristics as well as the surgical results of a cohort of patients operated for pelvic organ prolapse through laparoscopic surgery using these 3 surgical techniques.

## Study design, materials and methods

This is a single-center prospective study of patients undergoing laparoscopic repair of apical prolapse. The 3 techniques that we currently offer in our service have been compared: -Group -Group A: Sacropexy (SP), Group B: Dubuisson laparoscopic lateral suspension (LLS) and group C: Pectopexy (PP).

The inclusion criteria were patients with primary or recurrent symptomatic prolapse in stage > II according to the POP-Q. We excluded women with cervical elongation (defined as POP-Q Point C minus Point D ≥4). It was possible to perform hysteropexy, cervicopexy or colpexy in all groups. The exclusion criteria for hysteropexy (in these cases we perform supracervical hysterectomy) were contraindications for uterine preservation: uterine pathology, risk of ovarian/tubal cancer (BRCA 1 and 2), or endometrium, treatment with tamoxifen, and inability to follow a gynecologic cancer prevention program.

Other exclusion criteria were: history of abdominal prolapse reconstructive surgery, history of prolapse reconstructive surgery with vaginal mesh, Stage I according to the POP-Q classification, asymptomatic prolapse, medical contraindication for general anesthesia and patient preference for treatment vaginal surgery.

The primary outcome was treatment failure, which is defined as the existence of any of the following 3 elements:

- (1) new treatment for prolapse (pessary placement or surgery)
- (2) anatomical outcomes, defined as recurrence of apical prolapse (stages II-IV) and any non-static POP-Q measurement greater than 0
- (3) symptoms, measured using the validated PFDI-20 questionnaires (specifically the question: "Do you notice a sensation of lump in your genitals?", including the subanalysis of the questionnaires (POPDI-6, CRAD-8 and UDI-6) and PISQ-12.

The secondary objectives were to assess if there were differences in surgical times, complications, adverse events, individual anatomical measurements in the POP-Q examination, the presence, severity and impact of symptoms or discomfort derived from prolapse, urinary, intestinal and of pain, measured by validated scales: the PFDI-20 and PISQ-12

## Results and interpretation

We have operated a total of 180 cases: 115 SP, 33 LLS and 32 PP. There were no significant differences in the mean age of the patients in the 3 groups or in vaginal deliveries. There were differences in BMI, the mean was 27.51 (±4.45) Kg/m2 for the PP, and 25.67 (±3.69) Kg/m2 for the SP group (p=0.025). (Table 1).

CHARACTERISTICS	SACROPEXY (N=115 )	LLS (N=33)	PECTOPEXY (N=32)	P-VALUE
Age (years), mean (SD)	54,77 (10,13)	57 (7,64)	57,41 (9,90)	0,148
BMI (Kg/m² ), mean (SD)	25,67 (3,69)	26,78(3,42)	27,51(4,45)	<b>0,025</b>
Multiparous , n(%)	100	94,3	100	<b>0,014</b>
Vaginal Deliveries, n(%)	99,13	94,29	100	0,356
Previous hysterectomy, n(%)	21,7	5,7	28,1	<b>0,049</b>
apical prolapse estadio ≥II - Stage II (%) - Stage III (%) - Stage IV (%)	26,5 <b>56,6</b> 16,8	59,4 38,2 6,3	58,1 29,0 12,9	<b>0,001</b>
anterior prolapse estadio ≥II - Stage II (%) - Stage III (%) - Stage V (%)	26,9 53,8 19,4	11,8 <b>70,6</b> 17,6	10,0 63,3 26,7	0.110
posterior prolapse estadio ≥II - Stage II (%) - Stage III (%) - Stage IV(%)	55,9 32,4 11,8	5 - -	87,5 12,5 -	0,205
Aa	1,89 (1,44)	1,77(1,00)	1,71(1,05)	0,315
Ba	2,40(2,20)	2,40(1,17)	2,40(1,43)	0,942
C ó D	2,55(2,76)	0,650(2,22)	1,13(2,58)	<b>0,003</b>
Ap	-0,915(1,66)	-2,21(0,77)	-1,38(2,49)	<b>0,001</b>
Bp	-0,74(2,07)	-2,13(1,33)	-1,72(1,93)	<b>0,002</b>
gh	5,86(1,64)	5,25(1,60)	5,36(1,18)	0,177
pb	2,82(0,76)	2,98(1,76)	3,23(0,82)	<b>0,021</b>
tvI	7,61(1,24)	7,25(0,042)	6,92(1,20)	0,058
ultrasound data - genital hiatus area	32,93(8,76)	32,45(7,97)	31,31(7,07)	0,464
PFDI-20 - POPDI-6 - CRAD-8 - -UDI-6	13,79 (5,66) 8,63(5,87) 13,44(6,119)	13,50(5,71) 4,94(4,73) 12,06(6,72)	12,44(4,56) 8,93(6,06) 9,25(5,82)	0,691 0,077 0,118
Constipation (%)	9,6	14,3	28,1	<b>0,026</b>
PISQ-12	27,00(10,23)	30,80(9,30)	29,09(7,56)	0,522

Regarding surgical results, the highest rate of supracervical hysterectomies were performed in the SP group (78.3%) and the lowest in the LLS (5,7%)(P=0.000). The surgical time was significantly longer in the SP [214.44 (±65.38) vs LLS 108.79 (±34.93) and PP 163.83 (±49.80) minutes p=0.000], although the surgical time used in subtotal hysterectomy in the 3 groups was not statistically different. We also did not find significant differences in the rate of intraoperative complications (Table 2).

	SACROPEXY (N=115 )	LLS (N=33)	PECTOPEXY (N=32)	P-VALUE
Subtotal Histerectomy, n(%)	78,3	5,7	28,1	<b>0,000</b>
Surgical time(min)	214,44 (65,38)	108,79(34,93)	163,83(49,80)	<b>0,000</b>
intraoperative complications	7	2,7	0	0,214
Pessary (%)	0,9	-	-	0,746
surgical reintervention	5,2	5,7	-	0,406
Any POP-Q ≥ 0 (%)	7,4	3,3	20	0,084
Recurrence of apical prolapse ≥II (%) - Stage II - Stage III - Stage IV	- - 0,9	- 2,9	- - -	0,309
Recurrence of anterior prolapse ≥II (%) - Stage II - Stage III - Stage IV	0,9 1,7	-	- - -	0,363
Recurrence of posterior prolapse ≥II (%) - Stage II - Stage III - Stage IV	1,7 0,9	17,1	6,3 3,1	<b>0,019</b>
Aa postsurgery	-2,37(1,01)	-2,2(1,17)	-2,14 (1,18)	0,690
Ba postsurgery	-2.19(1,18)	-2,43 (1,06)	-2,14(1,32)	0,578
C ó D postsurgery	-5,99(2,25)	-5,58(1,42)	-4,76(3,13)	0,132
Ap postsurgery	-2,38(1,07)	-2,48(1,03)	-1,96(1,29)	0,117
Bp postsurgery	-2,46(1,04)	-2,48(1,03)	-2,04(1,39)	0,201
gh postsurgery	4,14(1,10)	3,75(1,12)	4.22(1,29)	0,335
pb postsurgery	3,20(0,72)	3,57(0,98)	3.28(0,81)	0,344
tvI postsurgery	8,81(1,37)	7,93(1,15)	7.74(1,18)	<b>0,000</b>
PFDI-20 - POPDI-6 - CRAD-8 - UDI-6	5,89(4,87) 7,60(6,86) 7,40((6,62)	4,03(3,62) 4,17(4,09) 5,59(6,01)	3.65(4,13) 5.05(4,78) 5,40(5,35)	0,089 0,081 0,357
feeling of lump in genitals (%)	3,5	2,9	0	0,567
PISQ-12	31,13(11,89)	31,48(11,39)	31,90(12,25)	0,987
maximum follow-up time ( months)	17,09(13,92)	7,598(5,75)	7,59(8,73)	<b>0,000</b>

Although there are some differences in the baseline characteristics of the patients prior to surgery, such as a higher BMI for the SP group and anatomical differences since the highest rate of apical stages III and IV are also in the SP, it is interesting to consider the other 2 alternative techniques because: there are no significant differences in the failure rate (measured by the apical recurrence rate, reintervention rate or use of pessaries and symptoms).

Regarding the POPQ measures, we only found differences in the higher TVL in the SP. However, the much shorter surgical time in alternative techniques is notable (in LLS less than half time compared with time used for SP) with no differences in intraoperative complications.

## Conclusions

More studies are needed, especially randomized, multicenter clinical trials to compare the effectiveness between these alternative techniques (LLS and PP) with respect to the gold standard (SP).

## References

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