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PROSPECTIVE STUDY OF VAGINAL VERSUS LAPAROSCOPIC SURGERIES FOR CENTRAL COMPARTMENT PELVIC ORGAN PROLAPSE

Hypothesis / aims of study

Surgical correction of central compartment prolapse with vaginal approach (sacrospinous fixation) has been shown to have risks of chronic pelvic pain and recurrent cystocoele (1). Vaginally-assisted laparoscopic sacrohystero/colpopexy (VALS) is a relatively new procedure using prolene mesh sutured vaginally and picked up laparoscopically for promotofixation (2).

Study design, materials and methods

Data was collected prospectively from the BSUG national surgical database from 2009-2012. Comparisons used questionnaire scores (ICIQ-VS) as well as objective assessment (POP-Q). We also compared the procedure time and complications at 3-month. Non-parametric Mann-Whitney test used was for statistical analysis.

Results

32 women underwent vaginal sacrospinous hystero/colpopexy and 29 had laparoscopic sacrohystero/colpopexy. Apart from a significant difference in age (Laparoscopy patients 10.4 yrs younger), all demographics were similar. There were significant improvements in ICIQ scores for vaginal symptoms (95% CI 18.5-27.5, $p < 0.01$) and sexual matters (mean change 28.11, $p < 0.05$) but no significant difference between groups. There was a significant fall in point C of POP-Q for the entire sample (without significant change in vaginal length) but no significant difference between groups. Surgery time was significantly longer in the laparoscopic group (mean difference 64.1 min, 95% CI 26.0 102.3) due to initial learning curve and choosing the laparoscopic approach for women with recurrent and complex conditions. Procedure-related risks for the two approaches and there were no mesh erosions at 3 months.

Table 1: Patients demographics

	Sacrospinous Fixation			Laparoscopic Sacropexy			Total		
	N	Mean	St Dev	N	Mean	St Dev	N	Mean	St Dev
Age	32	64.2	8.9	29	53.8	11.2	61	59.2	11.2
BMI	30	30.1	5.6	26	28.7	4.5	56	29.5	5.1
Surgery Time (mins)	12	58.9	55.2	20	123.0	48.8	32	99.0	59.4

Table 2: Comparison of ICIQ scores:

Type of operation	Sacrospinous Fixation			Laparoscopic Sacropexy			Total		
	N	Mean	St Dev	N	Mean	St Dev	N	Mean	St Dev
Pre_ICIQUI	17	7.41	6.73	23	8.65	7.28	40	8.13	6.99
Post_ICIQUI	19	3.16	4.34	18	7.39	6.00	37	5.22	5.57
ICIQ_ui_change	**13**	**3.92**	6.63	**15**	**1.53**	6.08	**28**	**2.64**	6.34
Pre_ICIQVS	30	31.53	10.42	27	32.26	12.11	57	31.88	11.16
Post_ICIQVS	16	11.75	15.49	19	8.21	7.53	35	9.83	11.79
ICIQ_vs_change	**14**	**22.36**	12.93	**18**	**23.50**	12.72	**32**	**23.00**	12.62
Pre_ICIQSM	17	29.35	26.87	14	42.71	22.03	31	35.39	25.32
Post_ICIQSM	5	11.80	25.83	7	12.00	22.48	12	11.92	22.77
ICIQ_sms_change	**4**	**20.25**	27.69	**5**	**34.40**	22.28	**9**	**28.11**	24.32

Table 3: Comparison of POP-Q scores:

	Sacrospinous Fixation			Laparoscopic Sacropexy			Total		
	N	Mean	Std. Dev	N	Mean	Std. Dev	N	Mean	Std. Dev
Pre_POPQ_Aa	28	.21	1.69	23	-1.30	1.29	51	-.47	1.69
Post_POPQ_Aa	8	-2.88	1.89	14	-2.07	1.59	22	-2.36	1.71
POPQ_Aa_change	8	**3.25**	**2.87**	13	**.85**	**1.77**	**21**	**1.76**	2.49
Pre_POPQ_Ba	28	-.07	1.94	23	-1.13	1.25	51	-.55	1.74
Post_POPQ_Ba	7	-2.29	.95	14	-2.57	.76	21	-2.48	.81
POPQ_Ba_change	7	**1.71**	**2.69**	13	**1.46**	**1.27**	**20**	**1.55**	1.82
Pre_POPQ_C	26	-.15	3.15	20	-.45	1.82	46	-.28	2.63
Post_POPQ_C	7	-5.43	2.15	10	-6.80	1.62	17	-6.24	1.92
POPQ_C_change	5	**6.60**	**3.36**	8	**6.38**	**2.33**	**13**	**6.46**	2.63
Pre_POPQ_Ap	28	-.25	1.60	23	-.72	1.50	51	-.46	1.56
Post_POPQ_Ap	8	-2.38	.74	14	-2.64	.84	22	-2.55	.80

POPQ_Ap_change	7	**1.43**	**1.13**	13	**2.12**	**1.47**	**20**	**1.87**	1.38
Pre_POPQ_Bp	28	-.50	2.05	23	-.63	1.60	51	-.56	1.84
Post_POPQ_Bp	8	-2.88	1.13	14	-3.07	1.07	22	-3.00	1.07
POPQ_Bp_change	7	**.71**	**1.98**	13	**2.58**	**1.87**	**20**	**1.93**	2.07
Pre_POPQ_D	20	-3.20	4.65	16	-3.63	2.99	36	-3.39	3.95
Post_POPQ_D	6	-6.33	2.88	11	-5.18	6.81	17	-5.59	5.65
POPQ_D_change	4	**3.50**	**4.51**	8	**.38**	**8.48**	**12**	**1.42**	7.33

Interpretation of results

There is no significant difference in subjective or objective outcomes between vaginal and laparoscopic suspension of the central compartment at 3 months. The longer time for the laparoscopic procedure is due to the learning curve effect and selecting the laparoscopic approach for complex and recurrent conditions.

Concluding message

VALS procedure is safe and as effective on the short term as the vaginal sacropexy procedure for the treatment of central compartment prolapse in women.

References

1. Cochrane Database Syst Rev. 2013 Apr 30;4:CD004014
2. Int Urogynecol J. 2013 Mar;24(3):377-84

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