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ANORECTAL SYMPTOMS BEFORE AND AFTER SURGICAL REPAIR OF PELVIC ORGAN PROLAPSE.

Hypothesis / aims of study
Anorectal symptoms, which include a feeling of incomplete emptying, straining, splinting to defecate, pain on defecation, urgency and incontinence, are present in 7 to 30% [1] of women with after pelvic organ prolapse (POP). Using validated questionnaires, the aims of the present study were to evaluate the pre- and postoperative incidence of anorectal symptoms as well as the impact of laparoscopic and vaginal surgical approaches to POP repair on these specific symptoms.

Study design, materials and methods
Data were prospectively collected from all women undergoing POP surgery between May 2001 and October 2009. Preoperative and postoperative ColoRectal-Anal Distress Inventory (CRADI) and ColoRectal-Anal Impact Questionnaires (CRAIQ) scores were compared with each surgical approach and between vaginal and laparoscopic surgery using Wilcoxon signed-rank test. A generalized linear model was used for multivariate analysis.

Results
Out of the 180 patients included, 90 patients were in the laparoscopy group, and 90 patients in the vaginal group. Overall, after a median follow-up of 32.4 months, prolapse surgery did not have any significant effect on CRADI (p=0.08) and CRAIQ (p=0.41)scores. However, laparoscopic surgery significantly worsened CRADI (p=0.03) with no effect on CRAIQ (p=0.37) scores. Vaginal surgery did not have any significant effect on any of the 2 scores (p=0.8 and p=0.25 respectively). The need for digital assistance was the most significant adverse anorectal symptom (p=0.003). No correlation was found between prolapse surgery (laparoscopic or vaginal) and anorectal symptoms after multivariate analysis (OR=2.45[95% confidence interval 0.99-6.05], p=0.05).

Interpretation of results
POP surgery, both laparoscopically and vaginally, did not have any effect on anorectal symptoms since both CRADI and CRAIQ scores remained unchanged after surgery. Nevertheless, laparoscopy alone significantly increased CRADI scores after surgery. A *de novo* need for digital assistance to defecate was the most determinant factor for increased CRADI scores. This association between surgery and anorectal symptoms disappeared on multivariable analysis.

Concluding message
Anorectal symptoms are not improved after POP surgery.

Table 1: Changes in anorectal symptoms after surgical repair of POP.

	Laparoscopy and vaginal groups n = 180			**Laparoscopy group n = 90**			**Vaginal group n = 90**		
Symptom	Before surgery	After surgery	p	Before surgery	After surgery	p	Before surgery	After surgery	p
Constipation	36(20%)	25(14%)	0.16	17(19%)	15(17%)	0.69	19(21%)	10(11%)	0.07
Digital assistance	25(14%)	17(11.7%)	0.63	7(7.8%)	5(5.7%)	0.55	18(20%)	16(17.8%)	0.70
Fecal incontinence	3(1.7%)	3(1.7%)	1	2(2.2%)	2(2.2%)	1	1(1.1%)	1(1.1%)	1
Incontinence to gas	4(2.2%)	3(1.7%)	0.70	1(1.1%)	1(1.1%)	1	3(3.3%)	2(2.2%)	0.65
Fecal urgency	3(1.7%)	1(0.6%)	0.62	1(1.1%)	1(1.1%)	1	2(2.2%)	0	0.16
Pain on defecation	2(1.1%)	0	0.16	0	0	1	2(2.2%)	0	0.16

Table 2: Incidence of *de novo* anorectal symptoms after surgical repair of genital prolapse.

***De novo* symptom**	**Laparoscopy and vaginal groups N = 180**	**Laparoscopy group n = 90**	**Vaginal group n = 90**	**p**
Straining	15(8.3%)	9(10%)	6(6.7%)	0.31
Digital assistance	11(6.1%)	10(11%)	1(1.1%)	0.001
Fecal incontinence	7(3.9%)	6(6.7%)	1(1.1%)	0.05
Incontinence to gas	2(1.1%)	1(1.1%)	1(1.1%)	1
Fecal urgency	1(0.6%)	1(1.1%)	0	0.46
Pain on defecation	2(1.1%)	2(2.2%)	0	0.20

References
1. 1 Burrows LJ, Meyn LA, Walters MD, Weber AM. Pelvic symptoms in women with pelvic organ prolapse. Obstet Gynecol 2004;104:982-988

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Is this a clinical trial?	**Yes**
Is this study registered in a public clinical trials registry?	**Yes**
Specify Name of Public Registry, Registration Number	**French National College of Obstetrics and Gynecology Trial Registry Registration number: CEROG2010011).**
Is this a Randomised Controlled Trial (RCT)?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**Yes**
Specify Name of Ethics Committee	**Ethics Committee of the French National College of Obstetrics and Gynecology (under the number CEROG2010011).**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**