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van Bavel J[1], Dietz V[2], Schraffordt Koops S E[3], van der Vaart C H[4], Roovers J P W R[5]
1. *Onze Lieve Vrouwe Gasthuis Amsterdam,* ***2.*** *Catharinaziekenhuis Eindhoven,* ***3.*** *Meander Medisch Centrum Amersfoort,* ***4.*** *Universitair Medisch Centrum Utrecht,* ***5.*** *Academisch Medisch Centrum Amsterdam*

PATIENTS WITH STAGE 2 OR MORE CYSTOCELE OR RECTOCELE FOLLOWING PRIMARY POP SURGERY REPORT ONLY LIMITED PELVIC FLOOR DYSFUNCTION

Hypothesis / aims of study
To study whether the association between anatomical abnormalities and pelvic floor function is similar in patients indicated to undergo pelvic organ prolapse (POP) surgery and patients who have undergone POP surgery.

Study design, materials and methods
Data for this study were collected from two randomized controlled trials. The first trial compared abdominal sacrocolpopexy and vaginal hysterectomy and the second trial compared unilateral sacrospinous ligament fixation and vaginal hysterectomy as surgical correction of uterine descent.
In both trials patients underwent POP-Q scoring before and at 6 weeks, 6 months and 12 months after surgery. At the same timepoints patients completed the following Dutch validated disease specific quality of life questionnaires: [1] the Urogenital Distress Inventory (UDI) to measure presence and bother of micturition and prolapse symptoms, [2] the Defecation Distress Inventory (DDI) to measure presence and bother of defecation symptoms, and [3] the Incontinence Impact Questionnaire (IIQ) to measure experienced limitations due to prolapse, micturition and defecation symptoms.
We compared UDI and IIQ scores between [1] patients with cystocele stage 2 or more (according to the POP-Q score) planned to undergo POP surgery, [2] patients with cystocele stage 2 or more 6 months after primary POP surgery and [3] patients with cystocele stage 1 or less 6 months after primary POP surgery. The same comparisons were made for rectocele stage 2 or more.
Unpaired T tests were used to compare domain scores. Statistical analysis was performed using SPSS 15.0. A p-value < 0.05 was considered to be statistically significant.

Results
Prospective data of 150 patients were collected from the two RCT's. Of these patients, 77 (51.3%) underwent vaginal hysterectomy (combined with anterior or posterior colporrhaphy is indicated), 34 (22.7%) underwent unilateral sacrospinous ligament fixation (combined with anterior or posterior colporrhaphy if indicated) and 39 (26%) underwent sacrocolpopexy.
The Table shows UDI, DDI and IIQ scores of patients before primary POP surgery and of patients 6 months after surgery. It was observed that in patients with stage 2 or more cystocele before surgery, all UDI domains scores were statistically significant higher than in patients with stage 2 or more cystocele 6 months after surgery. UDI domain scores 6 months after surgery between patients with and without stage 2 or more cystocele were similar, except for the prolapse domain of which the score was higher in patients with cystocele.
All IIQ domain scores, the embarrassment domain score excepted, were scored significantly higher by patients with stage 2 or more cystocele who had not yet undergone primary POP prolapse, as compared to patients who had undergone prolapse surgery 6 months before. IIQ domain scores 6 months after surgery between patients with and without stage 2 or more cystocele were similar.
DDI domain scores were similar between patients before and after primary POP surgery and also for patients after surgery with and without stage 2 or more rectocele. Only on the flatus domain patients with stage 2 or more rectocele who had not yet undergone primary POP surgery had higher scores as compared to patients 6 months after POP surgery. IIQ domain scores 6 months after surgery between patients with and without stage 2 or more rectocele were similar.

Interpretation of results
This study shows that patients with or without stage 2 or more prolapse after primary POP surgery have similar pelvic floor symptoms and similar limitations due to these symptoms. Furthermore it was shown that POP operated patients with persistent or de novo cystocele or rectocele report less pelvic floor symptoms and limitations due to these symptoms as compared to before undergoing primary POP surgery.
Several explanations may be given for the observation that patients with a significant cystocele or rectocele following primary POP surgery report only limited pelvic floor dysfunction:
First, patients in this study had a stage 2 or more middle compartment prolapse before primary POP surgery. This may have aggrevated the pelvic floor symptoms of stage 2 or more cystocele or rectocele in patients who had not yet undergone primary POP surgery. A second explanation is that there is a response shift meaning that patients who are operated have a higher tolerance of pelvic floor symptoms and thus rate their affected quality of life as less severe. A third explanation may be that pelvic floor function does not depend on pelvic floor anatomy. Several population studies have shown that the prevalence stage 2 or more POP exceeds 30%. Not all these women undergo surgery implicating that anatomical abnormalities do not necessarily results in pelvic floor dysfunction. A last explanation could be that patients are more inclined to fill in the postoperative questionnaires positive to hide the fact that the operation did not help them with some of their complaints.

Concluding message
Our data show that patients with cystocele or rectocele stage 2 or more who have undergone primary POP surgery have similar pelvic floor symptoms as compared to patients without these anatomical abnormalities. On average the pelvic floor symptoms of these patients are less than patients who have undergone primary POP surgery.
The observation that pelvic floor dysfunction and pelvic floor abnormalities are not related to each other in a population who have undergone primary POP surgery results in the statement
that the decision to perform prolapse surgery in this group of patients should mainly be based on the presence of functional symptoms and not on the presence of anatomical abnormalities.

	Domains	Cystocele ≥ stage 2 before surgery (n=137)	Cystocele ≥ stage 2 6 months after surgery (n=63)	Cystocele < stage 2 6 months after surgery (n=82)
UDI	Overactive bladder	26	13 ¶	14
	Incontinence	16	8 ¶	10
	Pain	20	10 ¶	11
	Prolapse	60	9 ¶	2 §
	Obstruction	18	9 ¶	12
IIQ	Mobility	20	8 ¶	11
	Emotional	11	6 ¶	5
	Physical	19	9 ¶	9
	Social	13	8 ¶	9
	Embarrassment	9	7	6
		Rectocele ≥ stage 2 before surgery (n=67)	Rectocele ≥ stage 2 6 months after surgery (n=22)	Rectocele < stage 2 6 months after surgery (n=123)
DDI	Pain	8	8	4
	Constipation	10	5	6
	Obstructive	11	11	8
	Fecal incontinence	7	4	5
	Soiling	18	12	8
	Flatus incontinence	37	15 ¶	23
IIQ	Mobility	19	10 ¶	9
	Emotional	14	5 ¶	5
	Physical	19	12	9
	Social	12	8	8
	Embarrassment	9	6	6

¶ = statistically significant difference as compared to before surgery
§ = statistically significant as compared to patients after surgery without cystocele or rectocele

Specify source of funding or grant	**none**
Is this a clinical trial?	**No**
What were the subjects in the study?	**HUMAN**
Was this study approved by an ethics committee?	**No**
This study did not require eithics committee approval because	**Data were extracted from two studies that have already been approved by an ethics committee**
Was the Declaration of Helsinki followed?	**Yes**
Was informed consent obtained from the patients?	**Yes**