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.RELATIONSHIP BETWEEN STAGE OF PELVIC ORGAN PROLAPSE AND SYMPTOMS OF PELVIC ORGAN DYSFUNCTION

Hypothesis / aims of study
Several studies have sought to establish a link between the severity of clinical pelvic organ prolapse (POP), and the severity of associated pelvic symptoms. Those studies have found only a weak relationship between POP and symptoms, but may have been hampered by their lack of a validated pelvic symptom questionnaire.
Patients participating in the **C**olpopexy **A**nd Prolapse **R**eduction **E**fforts (CARE) study are women with POP without stress urinary incontinence symptoms who are undergoing sacrocolpopexy, and are randomly assigned to either concomitant Burch or no Burch. At baseline, participants complete the validated Pelvic Floor Distress Inventory[1] (PFDI) and Pelvic Floor Impact Questionnaire (PFIQ) including urinary, colorectal and POP symptom and impact scores. We analysed the baseline CARE data to determine whether the stage of POP was related to the severity and impact of symptoms of pelvic dysfunction.

Study design, materials and methods
Baseline data from 313 subjects in the CARE study were analysed. PFDI/PFIQ subscale scores were computed, stratified by prolapse stage and by history of previous incontinence or POP surgery. Mann-Whitney tests were used to compare median scores between study groups. We fitted regression models to the subscale scores. Since women with Stage 2 prolapse had different symptom profiles than women in Stages 3 and 4, models were only fitted to data from women with Stage 3 and Stage 4 prolapse. The following were considered potential independent variables: POP stage, prior prolapse or incontinence surgery, BMI, age, race, educational status and whether employed. Regression models with only significant independent variables ($p<0.05$) were identified.

Results
The mean age of the subjects was 61 years and 90% were Caucasian. Forty-two (13%) had Stage 2 POP, 211 (68%) had stage 3 and 60 (19%) had Stage 4 POP. As detailed in Table I, women with Stage 2 POP, especially those with a history of prior surgery, had higher (worse) total scores on the POPDI ($p=0.004$) and CRADI ($p<0.001$) subscales than women with higher stage POP ($p=0.002$). This relationship was not present for urinary subscales, presumably because this was a selected population without symptoms of stress incontinence.

Regression analysis found that the mean of each subscore were higher among women with prior hysterectomy and that the mean of the POP and colorectal sub-scores increased with BMI. However, the predictors, although statistically significant, explained only a small amount of the observed variation.

Interpretation of results
Subjects with Stage 2 POP and history of prior surgery for incontinence or POP had the highest scores. Our findings likely reflect the nature of the sample of women studied, rather than shortcomings of the PFDI/PFIQ scales. Presumably, when women with Stage 2 POP with a prior history of surgery for POP or incontinence choose to undergo further surgery for POP they (i) may have a higher threshold for discomfort and impact before they are willing to undergo further surgery or (ii) may be driven more by pelvic symptoms than by clinically measurable POP to undergo re-operation. Alternatively, a subpopulation of the subjects with stage 2 POP may have had other clinically relevant abnormalities (e.g. concurrent perineal descent) not assessed by POP-Q staging.

Concluding message
Higher symptom and distress scores were found in women with Stage 2 POP, possibly due to the nature of the study population. The impact of pelvic symptoms on a women's daily life is broader than can be explained by the POP-Q alone.

Table I: Comparison of scores from patients with POP Stage 2 compared to those from patients with POP Stages 3 or 4, detailed according to whether patient had previously undergone surgery for incontinence or POP. Values represent median (interquartile range). P value represents significance of the test for difference between these scores.

History of prior surgery			
	POP stage	**Score**	**p-value**
POPDI	2	161 (103-207)	0.004
	3 or 4	96 (54-160)	
POPIQ	2	59 (6-147)	0.08
	3 or 4	25 (6-54)	
CRADI	2	119 (58-201)	<0.001
	3 or 4	50 (18-106)	
CRAIQ	2	64 (2-136)	0.004
	3 or 4	5 (0-34)	
UDI	2	70 (38-105)	0.2
	3 or 4	56 (34-96)	
IIQ	2	49 (9-123)	0.2
	3 or 4	30 (11-61)	
No history of prior surgery			
	POP stage	**Score**	**p-value**
POPDI	2	77 (39-117)	0.12
	3 or 4	89 (57-148)	
POPIQ	2	20 (4-89)	0.9
	3 or 4	19 (0-67)	
CRADI	2	27 (10-50)	0.045
	3 or 4	52 (17-108)	
CRAIQ	2	2 (0-24)	0.5
	3 or 4	4 (0-37)	
UDI	2	43 (34-56)	0.16
	3 or 4	49 (29-85)	
IIQ	2	35 (10-54)	0.6
	3 or 4	32 (10-83)	

Reference:
Psychometric evaluation of 2 comprehensive condition-specific quality of life instruments for women with pelvic floor disorders. American Journal of Obstetrics & Gynecology, 2001. 185(6): p. 1388-95.

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