

PELVIC ORGAN PROLAPSE AND BOWEL SYMPTOMS: A CASE CONTROL STUDY

Hypothesis / aims of study

The aim of the study was to test the null hypothesis that women with POP beyond the hymen would have the same symptoms and bother of obstructive defecation and anal incontinence (AI) as a matched group of women without POP.

Study design, materials and methods

In a case-control study, 156 women with POP at least one centimeter beyond the hymen were compared to 141 control women with normal supports (all POP-Q points at least 1 cm above the hymen) matched for age, parity, race, and hysterectomy.

Additional criteria for participation for cases and controls included the ability to understand and complete questionnaires in English and age >18 years. Women who had undergone hysterectomy were eligible if the surgery had been done at least two years before enrolment and if the indication for surgery did not include pelvic floor dysfunction (e.g. pelvic organ prolapse, urinary incontinence, or fecal incontinence). Exclusion criteria were leading edge of vaginal support within 1cm of the hymenal ring remnants (e.g. -1 cm, at the hymen or +1 cm on POP-Q), pregnancy currently or within the past year, use of a pessary within two weeks of enrolment, a history of prolapse surgery, a history of radiation therapy, a history of urinary incontinence, pelvic mass suspicious for cancer, known lower urinary or genital tract disease, recurrent urinary tract infections, or inability to tolerate pelvic examinations.

Questionnaires: All women completed questions concerning symptoms of obstructed defecation and anal incontinence and the associated degree of bother. Participants were asked to estimate how frequently these events occurred by choosing one of the following options: "never, on an occasional day, on most days, or on every day." In the second part of each question patients were asked to estimate bother as "not at all, somewhat, moderately, or quite a bit."

Clinical examination: The pelvic organ prolapse quantification (POP-Q system) was used to describe vaginal support. Testing was carried out by one of the authors or the urogynecology fellow.

Statistics: Differences between cases and controls were evaluated with t-tests when variables were continuous and chi square tests for categorical variables. Respondents were considered to have a defecation disorder and/or AI if they indicated that the symptom affected them "on most days" or "every day." The prevalence of these symptoms being at least "moderately" bothersome was compared among cases and controls. Symptoms of obstruction and AI were compared to POP-Q and prolapse types and analyzed using one-way analysis of variance.

Results

Symptoms of defecatory obstruction and anal incontinence are present in approximately one fourth of patients with pelvic organ prolapse, a rate at least 3 times more common than that found among age, parity, race, and hysterectomy matched controls ($p < .001$). For those women with defecation disorders or AI symptoms, women with prolapse were bothered significantly more than women with bowel symptoms that had normal support ($p < .05$). In women with prolapse, comparing those with bowel symptoms and those without showed no difference in all POP-Q points, leading edge of prolapse (anterior vs. apical vs. posterior), or overall stage.

	Controls (n=141)	Prolapses (n=156)	P
Defecatory Outlet Obstruction			
<i>With most or every bowel movement, do you:</i>	N (%)	N (%)	
<i>Have to push on the vagina or around the rectum to have a complete bowel movement?</i>	5 (4%)	31 (19%)	0.002
<i>Feel that you have not completely emptied your bowels?</i>	6 (4%)	40 (25%)	<0.0001
Anal Incontinence			
<i>On most days or every day, do you lose:</i>			
<i>Gas from the rectum beyond your control?</i>	10 (7%)	36 (23%)	0.0008
<i>Stool beyond your control if your stool is loose or liquid?</i>	0 (0%)	8 (6%)	<0.0001
<i>Stool beyond your control other than during an episode of diarrhoea?</i>	0 (0%)	5 (3%)	0.004

Interpretation of results

This study confirms prior case series [1-3] reporting the prevalence of abnormal bowel symptoms in women with POP. The absence of a correlation with the compartment of prolapse, leading edge, and overall stage is consistent with previous reports. This study is unique in that it is the first time that women with POP were compared to a matched control group in relation to bowel symptoms. Further investigations using functional and anatomic assessments, such as levator ani strength, levator muscle defects, and levator plate position and relationship to pelvic organs using static and dynamic imaging may help to determine the relationship between POP and defecation disorders.

Concluding message

While obstructive defecation symptoms and anal incontinence are significantly more common and bothersome in women with pelvic organ prolapse compared to controls, standard measurements on physical examination cannot predict symptoms.

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References:

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