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PATIENT CHARACTERISTICS AND SYMPTOMS INDICATIVE OF PELVIC ORGAN PROLAPSE IN OLDER WOMEN WITH PELVIC FLOOR SYMPTOMS: A CROSS-SECTIONAL STUDY IN PRIMARY CARE

Hypothesis / aims of study

Pelvic organ prolapse (POP) is a very common disorder. In a cross-sectional study in a general population of women aged 45-85 years, 75% had some degree of POP (1). POP can cause a variety of symptoms, including vaginal bulging, pelvic pressure or heaviness, pelvic pain, and urinary or fecal incontinence or obstruction. A considerable portion of women with symptomatic POP does not consult a physician. Main reasons are embarrassment to discuss POP symptoms and unfamiliarity with POP and it's treatment options (2). In order to improve care for women with symptomatic POP, physicians should know how to recognize these women. This study aims to identify symptoms and patient characteristics which are indicative of the presence of POP in older women with pelvic floor symptoms.

Study design, materials and methods

This is a cross-sectional study conducted in the context of the POPPS project which incorporates two randomized controlled trials comparing conservative treatment options for POP. Participants were recruited from 20 Dutch general practices (period 2009-2012). Each participating GP was asked to exclude patients who met the study exclusion criteria from an overview of all registered women aged ≥ 55 years in his practice. Exclusion criteria were current POP treatment (pessary, pelvic floor muscle therapy or surgery) or POP treatment in the past year, current treatment for a gynecological or urological disorder, current gynecological or urological malignancy, severe/terminal illness, inability to visit the GP's office, cognitive impairment and inability to understand/complete a Dutch questionnaire. A postal screening questionnaire gathering information about pelvic floor symptoms (urinary incontinence, vaginal bulging, pelvic heaviness and vaginal splinting to assist micturition or defecation) was sent to all eligible women. Women responding positive to one or more screening questions and who were willing to participate in the study were invited for an assessment. During this assessment written informed consent was obtained, information on demographics and medical and obstetric history was collected, and a physical examination including ICS pelvic organ prolapse quantification (POP-Q) was performed by a research physician. Bladder, bowel and pelvic floor symptoms were measured based on the Pelvic Floor Distress Inventory-20 (PFDI-20) questionnaire. The association between patient characteristics and symptoms and presence of POP was analyzed using logistic regression analysis. Univariate and multivariate analyses were performed with presence of POP as the outcome variable and patient characteristics and symptoms as determinants. Determinant variables with a p<0.157 in univariate analyses were included in the multivariate analysis. In the multivariate analysis, a best subset manual backward stepwise elimination procedure was performed, with p>0.157 as the criterion for removal of variables from the model (3).

Results

In the participating practices, 7241 women were aged ≥ 55 years, 1359 were excluded by the general practitioners. The screening questionnaire was sent to the remaining 5882 women and was returned by 60% (n=3526). Of those women, 40% (n=1413) reported one or more pelvic floor symptoms and 919 of them (65%) were willing to participate in the study. Another 20 women were excluded by the research physician (based on exclusion criteria) and 5 women had moved away or were unable to attend the assessment for another reason, ultimately resulting in a study population of 894 participants.
Study participants had a mean age of 65.4 years (SD 7.0) and a mean BMI of 26.7 kg/m^2 (SD 4.7). Mean parity was 2.3 (SD 1.2) and 98.8% was postmenopausal. A history of hysterectomy was present in 20.0% and previous pelvic surgery was reported by 8.5%. POP was present in 660 women (73.8%). Table 1 shows the odds ratios of variables contributing significantly (p<0,157) to the multivariate logistic regression model with the presence of POP as the outcome variable.

Interpretation of results

Increasing parity and previous POP treatment gave the highest risk of POP. Of the investigated symptoms, vaginal bulging was the strongest indicator of POP (table 1). These results are in line with previous research. Because we were interested in symptoms indicative of POP in the absence of vaginal bulging, we performed a subgroup analysis in women without vaginal bulging (table 1). In this group of 734 women, we found incontinence of solid faeces and vaginal splinting to complete defecation to be the strongest symptom predictors of POP.

Table 1: Multivariate logistic regression models: Odds ratios for the presence of POP

Variable	Total population*	Women without vaginal bulging†
	OR (CI)	OR (CI)
Age	0.96 (0.95 - 0.98)	0.96 (0.94 - 0.98)
Current or previous heavy physical work	-	0.68 (0.53 - 0.86)
Current or previous constipation	0.63 (0.50 - 0.80)	0.63 (0.49 - 0.81)

Parity	(vs. nulliparous)	(vs. nulliparous)
1	2.79 (1.62 - 4.81)	2.97 (1.65 - 5.32)
2	3.56 (2.43 - 5.21)	3.66 (2.44 - 5.49)
≥ 3	4.93 (3.28 - 7.39)	4.73 (3.08 - 7.26)
Previous POP treatment	1.69 (1.20 - 2.39)	1.80 (1.23 - 2.63)
Vaginal bulging	2.67 (1.81 - 3.96)	-
Splinting for defecation	1.39 (1.01 - 1.91)	1.68 (1.18 - 2.38)
Incontinence of solid faeces	1.57 (1.08 - 2.28)	2.03 (1.33 - 3.10)

* Complete case analysis in 866 women (28 excluded because of missing data)
† Complete case analysis in 723 women (11 excluded because of missing data)

Concluding message

We have identified a set of patient characteristics and symptoms indicative of POP in a general population of older women with pelvic floor symptoms. Increasing parity and previous POP treatment are well known risk factors for POP. Vaginal bulging is also known to be indicative of POP, but the association of splinting for defecation and incontinence of solid faeces with POP is less well established. Presence of these symptoms may indicate the need for a urogynecological examination, including assessment of POP.

References

1. Slieker-ten Hove MC, Pool-Goudzwaard AL, Eijkemans MJ, et al. The prevalence of pelvic organ prolapse symptoms and signs and their relation with bladder and bowel disorders in a general female population. Int Urogynecol J Pelvic Floor Dysfunct 2009; 20: 1037-1045
2. Pakbaz M, Rolfsman E, Mogren I, et al. Vaginal prolapse--perceptions and healthcare-seeking behavior among women prior to gynecological surgery. Acta Obstet Gynecol Scand 2011; 90: 1115-1120.
3. Royston P, Moons KGM, Altman DG, et al. Prognosis and prognostic research: Developing a prognostic model. BMJ 2009; 338: 1373-1377

Disclosures