

WHAT ARE THE DETERMINANTS OF SEEKING CARE IN CASE OF PELVIC ORGAN PROLAPSE? ANALYSIS OF A COHORT OF 2273 WOMEN

Hypothesis / aims of study

Pelvic organ prolapse is a common disorder in women from 50 years, which can impair quality of life [1]. It has no serious health consequences but the functional impact can push some women to seek care. Around 19% of women will undergo surgery during their lifetime due to pelvic organ prolapse [2]. Despite the frequency of these procedures little is known about the determinants that lead some women to seek treatment, especially what are the functional symptoms that are involved [3]. Our goal in this cohort analysis is to analyse what are the demographic factors, medical characteristics and functional pelvic floor disorders that are associated with care-seeking for pelvic organ prolapse.

Study design, materials and methods

Our sample consists of women aged 55 to 69 years participating in the GAZEL cohort (www.gazel.inserm.fr). The women included were employees of the French public power company's volunteered to respond to self-health questionnaires. They were interviewed in detail in 2000 on pelvic floor symptoms. Additional data were collected in 2008 through a new questionnaire that focused on pelvic floor symptoms and medical care undertaken since 2000. Of the 3907 women contacted in 2008, we received 3220 responses (82%). Among the 2640 women who had responded in 2000, 2273 (86%) responded again in 2008 and constitute our sample for this analysis.

The variables considered in the analysis were the women's demographic and social characteristics (age, educational level, occupation, household income, marital status, parity, social relations), lifestyle (physical activities, smoking, alcohol consumption), pelvic floor symptoms (urinary incontinence, vaginal bulge, constipation, dyspareunia, etc.), other symptoms (headache, sleep disorders, nervousness, sadness, mood changes, fatigue, dry skin, dizziness, breast pain, joint pain, tingling, spine pain; numbered from 0 to 12), and other health points (health-related quality of life estimated through the Nottingham Health Profile, BMI, diabetes, high blood pressure, or neurologic illness,).

Demand for care was defined as any medical visit for pelvic organ prolapse reported between 2000 and 2008.

We carried first a comparison between responders and non-responders. Variables were selected for multivariate analysis if they were significant at the threshold of 0.20 during univariate analysis. They were kept in the final models if $p < 0.10$. Four multivariate models were built: the first on demographic variables, the second on pelvic floor symptoms, the third on other health issues, and the last final model merged the 3 later.

Table 1: Vaginal bulge at baseline and seeking care for pelvic organ prolapse during the 8-year follow-up

Baseline (2000)	Seeking care for pelvic organ prolapse (2000-2008)		p, Fisher exact test
	No	Yes	
<i>In the past 4 weeks, have you experienced the sensation of a bulging from your vagina?</i>	% (n)	% (n)	
<i>Never</i>	97.2 (2038)	2.8 (59)	
<i>Rarely</i>	98.3 (58)	1.7 (1)	
<i>Sometimes</i>	90.8 (59)	9.2 (6)	<0.001
<i>Often</i>	72.2 (13)	27.8 (5)	
<i>All the time</i>	50.0 (4)	50.0 (4)	

Results

At baseline, prevalence of pelvic floor symptoms was 31.3% for frequency, 35.2% for urgency, 11.4% for nocturia, 52.4% for urinary incontinence, 4.0% for vaginal bulge, 19.2% for pelvic heaviness, 28.6% for dyschesia, 17.9% for constipation, 19.4% for incomplete voiding, 15.6% for strain to urinate, and 13.4% for dyspareunia. During the follow-up, 77 women (3.4%) reported seeking care for pelvic organ prolapse. More they experienced symptoms of vaginal bulge at baseline, more they asked for care during the follow-up period (Table 1).

In the multivariate analysis, variables significantly associated with seeking care for pelvic organ prolapse were parity, smoking, physical activities, vaginal bulge, nocturia, and the number of other symptoms (Table 2); non-significant variables were age, educational level, occupation, incomes level, marital status, BMI, health-related QoL, social support, alcohol consumption, frequency, urgency, urinary incontinence, pelvic heaviness, dyschesia, constipation, incomplete voiding, strain to urinate, dyspareunia, hysterectomy, diabetes, neurologic illness, and high blood pressure.

Table 2: Women's demographic characteristics (Model 1), pelvic floor symptoms (Model 2), and others health issues (Model 3) at baseline and seeking care for pelvic organ prolapse during the 8-year follow-up. Multivariate analyses.

		Model 1	Model 2	Model 3	Model 4
Baseline characteristics		OR [95% CI]	OR [95% CI]	OR [95% CI]	OR [95% CI]
Age	[49-55]	1	1	1	1
	[55-62]	1.8 [1.1-2.8]	1.6 [0.9-2.4]	1.5 [1.0-2.4]	1.5 [0.9-2.4]
Parity	0-1	1			1
	>=2	2.2 [1.3-3.8]			2.3 [1.3-3.9]
Smoking	yes	1.8 [1.0-3.4]			2.0 [1.1-3.9]
Physical activities	yes	1.7 [1.0-2.7]			1.7 [1.0-2.7]
	never/rarely		1		1
Vaginal bulge	sometimes/often/ all the time		6.9 [3.8-13]		6.2 [3.2-12]
	never/rarely		1		1
Constipation	sometimes/often/ all the time		0.5 [0.3-1.1]		0.5 [0.2-1.0]
Nocturia	>=2		2.1 [1.2-3.8]		2.1 [1.2-3.7]
Other symptoms (number of)	0-5			1	1
	6-9			1.4 [0.8-2.6]	1.3 [0.7-2.4]
	10-12			2.1 [1.2-4.0]	1.9 [1.0-3.7]
Hysterectomy	yes			1.6 [0.9-2.7]	
n/N		77/2273	75/2243	76/2257	74/2227
C-index		0.66	0.66	0.60	0.73

Interpretation of results

In this population-based 8-year cohort of women between 49 and 62 at baseline, seeking care for pelvic organ prolapse is somewhat rare. In case of vaginal bulge, a majority of women don't seek care even when they declare the symptom "all the time". Vaginal bulge is the main significant symptom in women seeking care for pelvic organ prolapse, the second one is nocturia. It is likely that these symptoms increase care seeking. The signification of the association between care seeking and smoking or physical activity seems more uncertain.

Despite our large sample and longitudinal design, interpretation is limited by the small number of events.

Concluding message

Research work is still needed to understand why a woman does not seek care in case of pelvic organ prolapse.

References

1. Fritel et al. Symptomatic pelvic organ prolapse at midlife, quality of life, and risk factors. *Obstet Gynecol* 2009;
2. Smith et al. Lifetime risk of undergoing surgery for pelvic organ prolapse. *Obstet Gynecol* 2010
3. Fritel et al. The individual determinants of care-seeking among middle-aged women reporting urinary incontinence: Analysis of a 2273-woman cohort. *Neurourol Urodyn* 2014

Disclosures

Funding: Our longitudinal study inside the GAZEL cohort was funded by the Institut de Recherche en Santé Publique (<http://www.iresp.net/>) **Clinical Trial:** No **Subjects:** HUMAN **Ethics not Req'd:** Under the French law, due to the observational design of the study, an ethics committee approval was not required. The GAZEL cohort scientific committee and the CNIL (French Data Protection Authority) approved this study. Each women enrolled in the GAZEL cohort, was volunteered to respond to self-administered health questionnaires (www.gazel.inserm.fr). **Helsinki:** Yes **Informed Consent:** Yes