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Self-perceived natural history of pelvic organ prolapse described by women presenting for treatment

Christina LEWICKY-GAUPP, MD, **Rebecca U. MARGULIES, MD**, **Kindra LARSON, MD**, **Dee E. FENNER, MD**, **Daniel M. MORGAN, MD**, and **John O.L. DeLANCEY, MD**
Pelvic Floor Research Group Division of Gynecology Department of Obstetrics and Gynecology University of Michigan Ann Arbor, Michigan, USA

Abstract

Introduction and Hypothesis—To describe the self-perceived natural history of pelvic organ prolapse (POP) in women seeking care.

Methods—Women presenting to a university-based urogynecology clinic for POP (N=107) completed a questionnaire including questions about how and when their prolapse was discovered. A urogynecologic examination including the Pelvic Organ Prolapse Quantification (POP-Q) was also performed.

Results—Forty eight percent of these women sought medical attention “immediately” after discovering a bulge. The median time to seek care was 4 months (range 1 month to 45 years). Twenty-six percent associated their prolapse with a specific event (e.g. moving furniture, pushing a car). POP was self-discovered by 76% (81/107) of women. Self-discovered prolapses were larger than those diagnosed by physicians (Ba +1.3 cm vs. 0.1cm, p=0.03 respectively).

Conclusions—Women seek medical advice within months of discovering their prolapse. Self-discovery is associated with higher stage prolapse than prolapse diagnosed by health care providers.

Keywords

natural history; pelvic organ prolapse

Introduction

Pelvic organ prolapse (POP) leads to over 225,000 operations each year in the United States [1] because of the distressing symptoms it causes and the impact it has on a woman's quality of life. Vaginal pressure, a bulging sensation, dyspareunia, and alterations in bladder and bowel habits are bothersome symptoms reported by women with POP [2]. The lifetime risk of undergoing an operation for prolapse or incontinence by age 80 has been estimated to be approximately 11% [3–4]. Recent studies have shown that women seeking treatment for advanced prolapse have diminished self-image and quality of life [5].

Despite the common and distressing nature of this condition, little is known about the natural history of prolapse, a woman's perception of when and how prolapse becomes clinically evident, and what ultimately drives her to seek treatment. Longitudinal studies provide important information about changes in measurements of vaginal and uterine

Corresponding author: Christina Lewicky-Gaupp 1500 East Medical Center Dr. Women's Hospital L4100 Ann Arbor, MI 48109-0276 clewicky@med.umich.edu Fax: 734-647-9272 Phone: 734-764-9386.

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support [6–8], but the annual incidence of symptomatic prolapse is low (approximately 2 to 3 per 1,000 women per year between 40 and 80 years of age) [3], making it difficult to study the development of symptomatic prolapse in a prospective manner. This investigation evaluates how and when women present for treatment of POP, how they experience the progression of the disease, and what ultimately leads them to seek care.

Materials and Methods

This was a cross-sectional study of new patients presenting to a tertiary-care urogynecology clinic for POP who had not previously undergone surgery for a pelvic floor disorder. Women were eligible to participate if they had complaints related to prolapse or if their referring physician had requested consultation concerning prolapse. Women referred by physicians with a diagnosis of prolapse and found to have normal support on physical exam were included in the analysis. Patients were excluded if they had a history of surgery for POP, congenital urogenital anomalies, neurologic disorders, were currently undergoing treatment for cancer, had a history of radiation to the pelvis, or were currently pregnant.

A health history questionnaire containing questions about their history of prolapse was completed by eligible and willing women. Patients were asked about initial prolapse discovery, timeframe from symptom onset/discovery to worsening, and factors that drove them to seek treatment. The questionnaire contained not only specific choices for some of the questions, but also had designated blank space for patients to describe their experience with POP in greater detail. Questionnaires were self-administered. Demographic information was collected at the time of the visit.

Patients also underwent a complete urogynecologic examination including the Pelvic Organ Prolapse Quantification (POP-Q), where all measurements (except genital hiatus, perineal body and total vaginal length) were made during a maximal Valsalva. Measures of the genital hiatus, perineal body and total vaginal length were recorded at rest. Responses to the questionnaire were correlated with clinical data using the patients' medical record from the initial visit. Descriptive statistics were used for baseline data and differences in means were compared with Student's t-tests. All statistical analyses were performed with SPSS 14.0 (SPSS, Incorporated, Chicago, IL). Significance was set at 5% (P=.05). The study was IRB approved (HUM00010718).

Results

One hundred and seven women participated in this convenience sample. Ninety-four percent had delivered vaginally (median parity 3, range 0–8); 6 were nulliparous. The demographics of the cohort are listed in Table 1. Of the women who had a hysterectomy (all for indications other than prolapse), 15 were performed via the abdominal route and 2 were performed vaginally. The mean time since hysterectomy was 22.4±10.4 years. Most women were postmenopausal, with a small percentage reporting either oral or vaginal hormone therapy. The majority of patients were found to have stage 2 (50.0%) and 3 (47.2%) POP.

Most women (81/107, 76%) described having discovered their own prolapse. The remainder reported being diagnosed with pelvic organ prolapse by a health care provider. This was determined based on the question “Were you made aware of the prolapse by your doctor, or did you discover it yourself?” Patients then checked off either “My doctor discovered it” or “I discovered it.” When these two groups of women were compared (self-discovery vs. physician-diagnosed), 94% (76/81) of the self-discovery group reported being aware of a vaginal bulge. This was in contrast to the physician-diagnosed group, where only 50% (13/26) reported feeling a bulge. The anterior wall (mean point Ba) of the self-discovery

group was significantly further beyond the hymenal ring than that of women diagnosed by their physicians (Table 2). Among the physician-diagnosed group, 65% (17/26) had stage 2 and 35% (9/26) had stage 3 or stage 4 (n=1) POP. Among the stage 2 women, the most dependent point of the prolapse was at least 1 cm above the hymen in 27%. Otherwise, the groups did not differ with respect to age, BMI, gravity, or parity.

Of those who replied to the question, "Was there a sudden worsening of your vaginal bulge?" (n=94), over a quarter (25/94, 27%) answered affirmatively and associated the worsening with a specific event (e.g. moving furniture, pushing a car, riding a tractor). The majority of these women (18/25, 71%) sought treatment "immediately." Of those that did *not* report a sudden worsening (n=69), many did not specify the timeframe of their bulge worsening (not answered); the remainder answered that their POP progressed over months to years (Figure 1). Those who recalled a gradual worsening were significantly older than women reporting a sudden worsening of their prolapse (58.4±13.1 vs. 52.0±14.6 years, P=. 05).

Half of all women (48%) reported seeking medical attention "immediately" after discovering a bulge, irrespective of whether or not they had symptoms of pelvic floor dysfunction. Overall, median time to seek care was 4 months (range 0 months to 45 years) and 80% of women sought care within one year of bulge discovery (Figure 2). Eight individuals waited more than 5 years to seek medical advice about their POP (excluded from Figure 2). These women cited worsening of the bulge (n=5), physician advice (n=2), and urinary incontinence (n=1) as reasons to ultimately seek care. The most common reasons cited for seeking care were "worsening bulge" and "to know what to do." Lower urinary tract symptoms and vaginal irritation were far less commonly reported (Figure 3). Of the women who sought care at our institution via referral (i.e., "at PCP recommendation"), most (66.6%, 12/18) reported being diagnosed with prolapse by their primary gynecologist.

Discussion

This study provides information about women's experience in the discovery of and changes that occur with POP, as well as what factors drive women to seek treatment. A unique finding was that one third of the women specifically recalled a sudden worsening of their bulge. The large number of patients reporting a specific event leading to symptom development is surprising, as most published studies suggest a gradual progression of POP over time. Previously, Bradley et al. studied longitudinal changes in POP-Q points occurring each year (over 4 years) in a longitudinal cohort of menopausal women. Prolapse was defined as descent at or below the hymen. The authors found similar rates of prolapse incidence and regression at 1 year (26% and 21%) [8]. Handa et al. described low progression rates (per 100 woman-years) of grade 1 prolapse (not extending beyond the hymen) of 9.5 (for cystoceles), 13.5 (for rectocele) and 1.9 (for uterine), with much higher rates of regression [7]. While longitudinal studies adequately document changes in support over time, they are limited by the small number of women who develop prolapse during the study period.

By asking women specific questions, we were able to broadly characterize the time span of symptomatic prolapse progression as perceived by women seeking care. More specifically, we were able to characterize the progression of POP based on clinical symptoms which, unlike anatomic measurements, are more consistent over time. In this cohort, progression of POP was extremely variable, ranging from sudden to many years.

Many factors (e.g. age, impact on quality of life) are known to influence care-seeking for urinary incontinence [9–11]. On the other hand, little is known about POP care-seeking, and

studies estimate that many women affected by pelvic floor disorders never seek care [12]. Almost half of the women queried in this study sought treatment immediately upon discovering a bulge, whether or not they had other symptoms. Further, the overall timeframe for seeking treatment was short. This finding is consistent with Morrill et al, who found that 73% of women with POP sought care compared to 61% with urinary incontinence and only 41% with fecal incontinence [13]. The current study's results extend these findings by establishing the timeframe from bulge onset to care-seeking behavior in women presenting for treatment.

Our finding that only half of the women whose “prolapse” was discovered by a primary care physician were symptomatic from a vaginal bulge, incontinence or defecational problems, highlights the need to further evaluate the current POP-Q definitions of “prolapse.” A woman with an anterior vaginal wall 1 cm above the hymen is labeled with stage 2 prolapse, despite the fact that data drawn from community-dwelling, asymptomatic women shows this value to be entirely within the normal range [14–15]. Most women diagnosed with POP by their physicians had stage 1 and 2 “prolapse.” The majority of these women sought further care at our institution solely because they were referred. This is similar to other studies, which have found that prolapse above the level of the hymen is rarely symptomatic [16]. Furthermore, only 49% of women with stage 2 POP have a sensation of vaginal bulge [17]. This is relevant, as referral for POP in asymptomatic women (with anatomic stage 1 and 2) potentially can cause undue concern for the patient and lead to unnecessary medical interventions and their associated risks.

It is important to consider the design of this study in interpreting our results. This was a cross-sectional study with a convenience sampling of women presenting to a tertiary care institution. We chose to study this enriched population because it allowed us to develop an understanding about a woman's perceptions of a pathophysiologic process that would be difficult to study in a prospective fashion. Our findings are representative of women who seek care or are referred for care, and previous investigators have estimated that only 10–20% of women with POP seek medical care for their symptoms [18]. In addition, our findings may be different for women seeking care in primary obstetrics and gynecology practices. Our results, as is true of other research that seeks to understand patient's perceptions of their disease over time, is subject to recall bias. This area of study has not yet been developed and there is a lack of standardized questionnaires addressing women's perception of prolapse. The EPI-Q [19] and other validated questionnaires [20] focus more on screening for the presence and degree of bother related to POP. To consider women's experience with prolapse development, we opted to ask patients questions regarding their experience of prolapse and treatment-seeking behavior.

As clinicians and surgeons, we must understand which symptoms and concerns direct patient care and treatment-seeking behavior. While most women presenting for care related to POP described a gradual progression of symptoms over months to years, twenty-five percent reported a specific event leading to their prolapse and immediately sought treatment. Overall, women sought health care over a broad range of time, but most sought care within one year of symptom onset. These insights may ultimately lead to a better understanding of the disease progression, mechanisms of prolapse development, and the timeframe for the most effective treatment of the disease. In addition, many educational opportunities exist for both patients and health care providers concerning symptoms, patient perceptions, vaginal anatomy and topography, as well as the natural progression of POP.

Acknowledgments

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Abbreviations

POP	Pelvic organ prolapse
POP-Q	Pelvic Organ Prolapse Quantification

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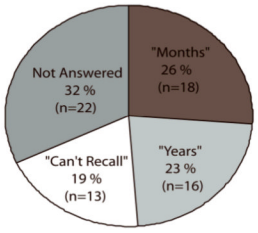

Figure 1.
Self-reported progression of pelvic organ prolapse in patients not reporting “sudden” worsening of their prolapse

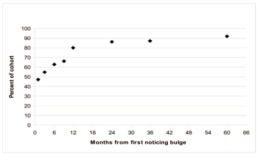

Figure 2.
Cumulative percentage of cohort presenting for care from first noticing bulge over time

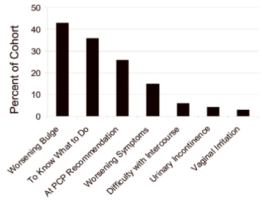

Figure 3.
Reasons cited for seeking treatment

Table 1

Cohort demographics*

Characteristic (n=107)	
Age (years)	57.5±13.9
BMI (kg/m2)	26.9±4.2
Forceps-assisted vaginal deliveries	0.4±0.7
Spontaneous vaginal deliveries	2.0±1.5
Cesarean sections	0.1±0.3
Episiotomy	0.8±1.0
Hysterectomy, n (%)	17 (16)
Postmenopausal, n (%)	76 (71)
Current hormone replacement therapy, n (%)	16 (15)
Current smoker, n (%)	3 (3)

*All values expressed as mean ± standard deviation or number and percent of occurrence

Table 2

POP-Q of physician-discovery versus self-discovery groups

POP-Q Point (cm)	Physician-Discovery Group (N=26)*	Self-Discovery Group (N=81)*	95% CI of Difference	P-Value
Aa	−0.2±1.9	0.6±1.7	−1.6, 0.1	.07
Ba	0.1±2.9	1.3±2.3	−2.4, −0.1	*.04*
C	−3.4±4.5	−2.4±4.4	−3.0, 1.0	.32
D	−6.5±3.6	−5.7±3.2	−2.5, 0.9	.38
Bp	−0.3±2.2	−0.7±0.8	−0.5, 1.3	.43
Ap	−0.7±1.4	−0.9±1.4	−0.4, 0.8	.48
Genital Hiatus	3.6±1.3	3.7±1.1	−0.7, 0.5	.70
Perineal Body	2.7±1.0	2.7±1.0	−0.5, 0.5	.94
Vaginal Length	9.8±0.7	10.1±1.0	−0.7, 0.2	.25

*All values expressed as mean ± standard deviation