Symptoms of Pelvic Floor Disorders and Quality of Life Measures in Postoperative Patients With Endometrial Cancer

Patrick A. Nosti,1 Colleen D. McDermott,2 Jeanne M. Schilder,3 Frederick B. Stehman,3 Patrick J. Woodman2

Abstract

This cross-sectional observational study measured symptoms of pelvic floor disorders (PFDs) and their effect on quality of life in 25 women returning for postoperative care at least 6 months after total abdominal hysterectomy for endometrial cancer. Pelvic floor symptoms and impact were assessed using the short-form versions of 2 validated quality of life questionnaires: the Pelvic Floor Distress Inventory (PFDI-20) and the Pelvic Floor Impact Questionnaire (PFIQ-7). Pelvic symptoms were reported at a much higher rate (84%) than in the general public, with a mean “bother” score in the mild range: 26.4 ± 64.5. Although the degree of bother most commonly was mild, patients should be counseled that these embarrassing symptoms are possible and potentially screened for after surgical intervention.

Background: The primary goal of this study was to determine the prevalence of pelvic floor symptoms in postoperative patients with endometrial cancer. The secondary goal was to assess the impact of these issues on patient quality of life.

Methods: This cross-sectional study looked at women (N = 25) returning for postoperative care at least 6 months after total abdominal hysterectomy for endometrial cancer. Demographic and clinical data were collected. Severity of pelvic floor symptoms was assessed using the short-form version of the Pelvic Floor Distress Inventory (PFDI-20). The impact of these symptoms on quality of life was assessed using the short-form version of the Pelvic Floor Impact Questionnaire (PFIQ-7). Demographic data and PFDI-20 and PFIQ-7 scores were summarized using descriptive statistics. Results: Pelvic symptoms were reported at a much higher rate than seen in the general public. Symptom prevalence was reported by 21/25 (84%) patients on the PFDI-20 questionnaire, with a mean score of 52.5 ± 64.8. Patients reported prevalence of symptoms in the following order: urinary symptoms (19/25 [76%]) > colorectal-anal symptoms (17/25 [68%]) > pelvic organ prolapse symptoms (11/25 [44%]). Slightly fewer than half (11/24) of the study participants reported quality of life issues associated with their pelvic symptoms, with a mean score in the mild range: 26.4 ± 64.5. The reported prevalence of the effect of pelvic symptoms on quality of life was urinary (10/25 [40%]) > colorectal-anal (8/24 [33%]) > pelvic organ prolapse (4/24 [17%]). Conclusion: This study has shown that there was a high prevalence of symptoms of PFDs in our population after abdominal hysterectomy for endometrial cancer.

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Keywords: Colorectal anal incontinence, Endometrial cancer, Hysterectomy, Pelvic floor disorders, Pelvic organ prolapse, Postoperative, Urinary incontinence

Introduction

Pelvic floor disorders (PFDs) are common and include urinary incontinence, pelvic organ prolapse, and fecal incontinence. A recent cross-sectional study published by the Pelvic Floor Disorders Network (PFDN) found the prevalence of at least 1 of these disorders in...
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PFD/QoL After Hysterectomy for Endometrial CA

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<th>Table 1</th>
<th>Demographic Data in (N = 25) Posthysterectomy Patients With Endometrial Cancer</th>
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<td>Age (Y)</td>
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<td>(34-80)</td>
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<td>Continuous data summarized as mean (range).</td>
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the general population to be 23.7%, with 15.7% of women experiencing urinary incontinence, 2.9% of women experiencing pelvic organ prolapse, and 9.0% of women experiencing fecal incontinence symptoms. Moreover the proportion of women reporting at least 1 disorder increased incrementally with age, parity, and body mass index (BMI). As a result, more than 338,000 procedures for PFD disorder increased incrementally with age, parity, and body mass index (BMI). As a result, more than 338,000 procedures for PFD are performed each year in the United States, with a total cost estimated to be more than $1 billion annually.3,4 Risk factors for prolapse include BMI, older age, higher gravidity and parity, and history of hysterectomy (especially hysterectomy for prolapse or other prolapse or incontinence operations).5-7 These are some of the same risk factors associated with an increased risk of endometrial cancer. This cancer is the most common gynecologic malignancy in the United States, with 40,100 cases diagnosed and 7470 deaths occurring annually. Of those cases, approximately 75% of patients are diagnosed with stage I cancer, the treatment for which is hysterectomy ± lymph node sampling.8,9

Given the similarities in the risk factors for these 2 disease processes and anecdotal evidence at our institution, we hypothesized that there is a high probability that the 2 conditions may coexist. However, a MEDLINE search between January 1964 and April 2009, using the terms hysterectomy, endometrial cancer, incontinence, fecal, urinary, prolapse, cystocele, rectocele, uterine, and enterocele did not identify any published studies addressing the prevalence of PFD symptoms in this patient population. The goal of our pilot study was to identify the prevalence of symptoms of PFD in posthysterectomy patients with endometrial cancer within the first 5 postoperative years. In addition, we sought to assess the impact of these issues on patient quality of life.

Patients and Methods

This was a cross-sectional study of women returning for postoperative care at least 6 months after total abdominal hysterectomy for endometrial cancer. It was approved by the institutional review board of our metropolitan tertiary referral center. Informed consent was obtained at the time the survey was distributed. Inclusion criteria were any patient with the diagnosis of endometrial cancer (made by surgical or pathologic diagnosis) who underwent a hysterectomy as part of the treatment. Participants were recruited between April 2008 and June 2009. Exclusion criteria included previous radiation therapy and previous surgery for PFDs.

Demographic data were collected at the time of questionnaire distribution. These features included age, height and weight, time since surgery, the 2008 International Federation of Gynecology and Obstetrics cancer stage, type of hysterectomy, menopausal status, hormone replacement status, smoking status, parity, and number of vaginal deliveries. Two validated questionnaires were used to assess PFD symptoms and their effect on quality of life.10,11 Severity of pelvic floor symptoms was assessed using the short-form version of the Pelvic Floor Distress Inventory (PFDI-20), which is composed of 3 subscales: Urinary Distress Inventory (UDI-6), Pelvic Organ Prolapse Distress Inventory (POPDI-6), and Colorectal-Anal Distress Inventory (CRADI-8).10,11 The impact of these symptoms on quality of life was assessed using the short-form version of the Pelvic Floor Impact Questionnaire (PFIQ-7). The PFIQ-7 is composed of 3 scales (Urinary Impact Questionnaire (UIQ), Colorectal-Anal Impact Questionnaire (CRAIQ), and the Pelvic Organ Prolapse Impact Questionnaire (POPIQ)).

The PFDI-20 is a set of 20 symptom questions, answered on a 4-point Likert scale: 1 = not at all to 4 = quite a bit. The mean values of all answered items are multiplied by 25 to determine the scale score (range 0-100). A summary score is also reported (range 0-300). The PFIQ-7 is a set of 21 impact question, answered on a similar 4-point Likert scale. The mean value of all answered items are multiplied by (100/3) to obtain the scale score (range 0-100). Again, a summary score is also reported (range 0-300). Higher scores denote a greater symptom or impact score.12 PFDI-20 and PFIQ-7 scores were averaged using descriptive statistics and compared with historical means.1

Results

A total of 34 patients met the inclusion criteria, and 25 patients were recruited for the study. Demographic data are summarized in Table 1. Mean age of participants was 62 ± 12 years and median follow-up was 19 months (range, 6-42 months). The predominant endometrial cancer stage was IB. All candidates were hormone naive and had undergone extrafascial abdominal hysterectomy with bilateral salpingo-oophorectomy ± lymph node sampling (19/25). Pelvic symptoms were reported by 21/25 (84%) patients on the PFDI-20 questionnaire, with a mean score of 52.2 ± 64.8. Mild symptoms (PFDI-20 score 1-100) were reported by 19/25 (76%) and severe symptoms (PFDI-20 score 200-300) were reported by 2/25 (8%) of study participants. Symptom prevalence occurred in the following order: urinary symptoms (19/25 [76%]) > colorectal-anal symptoms (17/25 [68%]) > pelvic organ prolapse symptoms (11/25 [44%]) (Table 2), demonstrating that most posthysterectomy patients with endometrial cancer had more than 1 pelvic floor symptom. There was no significant association of pelvic floor symptoms or poorer quality of life to a higher endometrial cancer stage (P > .05).

Slightly fewer than half (11/25 [44%]) of the study participants reported quality of life issues associated with their pelvic symptoms, with a mean score of 26.4 ± 64.5. Nine of the symptoms were in the mild range (PFIQ-7 score 0%-33%), and 1 symptom each was in the moderate or severe range. The reported prevalence of the effect of pelvic symptoms on quality of life was distributed as follows: urinary
(10/25 [40%]) > colorectal-anal (8/24 [33%]) > pelvic organ prolapse (4/24 [17%]) (Table 3).

Discussion

The PFDI-20 and PFIQ-7 are 2 complimentary condition-specific health-related quality-of-life questionnaires for women with PFDs.13 The PFDI and PFIQ can be used to measure the extent of lower urinary tract, colorectal-anal, and pelvic organ prolapse symptoms and how they affect the quality of life of these women. They are validated, reliable, and responsive to change and have become a common measure of patient-oriented outcomes in urogynecologic research.10,11,13 They measure symptom distress and the impact of those symptoms on daily activity, relationships, and emotions. These patient-oriented outcomes have been recommended for improving the quality of clinical research projects and are strategic goals for the Agency for Healthcare Research and Quality. By linking the care individuals get to the outcomes they expect and are strategic goals for the Agency for Healthcare Research and Improvement is typically observed in women with more severe symptoms.18,19 PFDs were not associated with a higher endometrial cancer stage.

This preliminary study has some limitations. First, our sample size was small (N = 25) and lacked baseline preoperative data. This was because of the practice patterns at our tertiary referral institution. Patients with stage I disease were often directed back to their general obstetrician/gynecologist for follow-up visits after the initial postoperative period had passed. This prohibited the collection of questionnaires from these patients and also introduced a level of selection bias to our study. A larger population could undergo multivariate analysis to determine major risk factors for PFDs in postoperative women who have undergone hysterectomy for endometrial cancer. Patients with more aggressive or advanced-stage tumors were more likely to follow up with their oncologist. If these patients had more aggressive or invasive procedures, they may be prone to more PFDs. Could it be that excision of the parametrium removes the elastofibromuscular support tissue typically used for resuspension of the resultant vaginal cuff? Patients with postoperative problems, such as PFD symptoms, may be more likely to return to their operating surgeon as opposed to their local generalist. Such an effect would have artificially increased the rate of PFD symptoms reported in the present study. One last consideration is the medium-term follow-up. If these patients are again surveyed after 5 or 10 years, the prevalence of PFD symptoms or subjective distress may have dropped, although this would not be expected to drop below baseline levels.

However the findings of this study underscore the importance of research in this population. Future investigations would benefit from...
the identification of patients with PFDs preoperatively. This would establish a PFD symptom baseline for these patients. In addition, follow-up through mailed surveys would decrease the number of patients lost to follow-up and thus increase the total number of study participants. If the prevalence of PFD symptoms in patients with endometrial cancer is higher, these patients may benefit from consultation before surgery, concomitant procedures when indicated, and increased clinical screening postoperatively.

**Conclusion**

This study has shown that there was a high prevalence of PFD symptoms in our population of women who underwent abdominal hysterectomy for endometrial cancer. A large prospective cohort study is necessary to verify these results. Although the degree of bother most commonly was mild, patients should be counseled that these symptoms are possible. Early screening of this high-risk population in the postoperative period may increase identification and improve patient quality of life.

**Clinical Practice Points**

- There is a high prevalence of symptoms of PFD after hysterectomy for endometrial cancer.
- Most women have symptoms of pelvic floor disorder in more than 1 organ system, eg, urinary incontinence, pelvic prolapse, or colorectal-anal issues.
- The negative quality of life effects in most women who have had hysterectomy for endometrial cancer are in the mild range.

**Acknowledgment**

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**Disclosure**

The authors have stated that they have no conflicts of interest.