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Sexual Abuse History and Pelvic Floor Disorders in Women

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Abstract

Objectives—Sexual abuse rates in the general female population range between 15% and 25%, and sexual abuse is known to have a long-term impact on a woman's health. The aim of this study was to report the prevalence of sexual abuse history in women presenting to clinicians for pelvic floor disorders (PFD) and to determine whether a history of sexual abuse is associated with a specific type of PFD.

Methods—We conducted a retrospective chart review of new urogynecology patients seen at the University of New Mexico Hospital. All women underwent a standardized history and physical examination and completed symptom severity and quality-of-life measures. Univariate and multivariable analyses were conducted to determine which PFDs were associated with a history of sexual abuse among women with and without a history of sexual abuse.

Results—A total of 1899 new urogynecology patients with complete information were identified from January 2007 and October 2011; 1260 (66%) were asked about a history of sexual abuse. The prevalence of sexual abuse was 213/1260 (17%). In the multivariable analysis, only chronic pelvic pain remained significantly associated with a history of sexual abuse.

Conclusions—A history of sexual abuse is common among women with PFDs, and these women were more likely to have chronic pelvic pain.

Keywords

pelvic floor disorders; sexual abuse

Prevalence estimates for lifetime sexual abuse, defined as any unwanted sexual activity at any point in time, range between 15% and 25% in the general female population.^{1–4} Sexual abuse is known to have a long-term impact on a woman's health and is associated with irritable bowel syndrome,⁵ pelvic pain,⁶ and dyspareunia.⁷ Urogynecologists frequently provide care to women with these disorders, as well as other pelvic floor complaints. Pelvic floor disorders (PFDs) routinely seen by urogynecologists include urinary or anal incontinence and pelvic organ prolapse.

Researchers have described an association between a history of sexual abuse and overactive bladder,⁹ as well as painful bladder syndrome.^{8–10} Others have found that women with a history of sexual abuse complain more frequently of multiple PFDs.¹¹ These previous

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studies have been limited because of their small sample sizes, ranging from 30 to 58 women, and because of the exclusion of women with anal incontinence.

We aimed to identify the prevalence of sexual abuse, determined by a standardized intake questionnaire, among a large population of women presenting to clinicians for treatment of pelvic floor dysfunction. Our secondary aim was to identify whether a sexual abuse history was associated with urinary incontinence, anal incontinence, pelvic organ prolapse, chronic pelvic pain, or all of these conditions.

Methods

This is an institutional review board–approved retrospective chart review of all new patients presenting to the urogynecology clinic at the University of New Mexico from January 2007 to October 2011. Starting in 2007, all new patients presenting for care of PFDs were interviewed in person using a standardized, physician-administered intake questionnaire. This questionnaire included the patient's age, body mass index, ethnicity (Hispanic or non-Hispanic white, Native American, Other), parity, and prior surgical history (incontinence or prolapse surgery, hysterectomy, oophorectomy). Dichotomous answers to queries regarding the following were recorded: history of depression, dyspareunia, anxiety, alcohol use, tobacco use, and whether the patient had a partner. A yes/no question inquiring whether women had any history of sexual abuse also was asked. This standard questionnaire was completed by the physician as he or she interviewed the patient about her PFD. In addition, all women underwent a standardized pelvic examination by the attending physician, including the Pelvic Organ Prolapse Quantification examination. Diagnoses of patients' PFDs were determined by reviewing the attending physician's dictation of the new patient encounter. The PFDs explored in association with sexual abuse were pelvic organ prolapse, stress urinary incontinence, overactive bladder (OAB), mixed urinary incontinence, anal incontinence, painful bladder syndrome, and/or chronic pelvic pain. Although painful bladder syndrome also is a cause of chronic pelvic pain, we use chronic pelvic pain as a diagnosis when no discrete identifiable cause for the pain is available and the pain has been present 6 months. Patients were excluded if they did not speak English or if they had incomplete or missing forms that were necessary for data collection.

Univariate analysis was performed using the *t* test for continuous variables and the χ^2 or Fisher exact test for categorical variables. Significant variables in the univariate analysis were then entered into a stepwise logistical regression analysis that compared specific PFDs with a history of sexual abuse. We then grouped patients into having one, two, three, or four PFDs and compared those groups based on history of sexual abuse. The PFDs explored in these grouped analyses were categorized as urinary incontinence (stress, urgency, or mixed), fecal incontinence, symptomatic pelvic organ prolapse, and pelvic floor pain disorders (painful bladder syndrome, chronic pelvic pain). Patients were grouped by the number of PFDs based on the attending physicians' dictation of the problem list. Significance was set at *P* = 0.05.

Main Outcome Measures

Univariate and multivariable analyses were conducted to determine which PFDs were associated with a history of sexual abuse among women with and without a history of sexual abuse. We used SAS version 9.3 (SAS Institute, Cary, NC) in the statistical analysis.

Results

Of the 1899 new patients included in this database, 1260 (66%) were asked about a history of sexual abuse. Of these 1260 women, 213 answered yes, for an overall prevalence of history of sexual abuse of 17% among women presenting with PFDs in this cohort. Women who were not asked about a history of sexual abuse ($n = 639$) were more likely to be older and non-Hispanic white ($P < 0.05$), but they did not differ by PFD diagnosis ($P > 0.05$).

Women with a history of sexual abuse were younger, had higher body mass indices, higher rates of depression and anxiety, and were more likely to use tobacco than women without a history of sexual abuse; they also had public insurance and were without a partner (all $P < 0.05$; Table 1). The univariate analysis between a history of sexual abuse and specific PFDs showed a positive association with fecal incontinence ($P = 0.037$) and chronic pelvic pain ($P = 0.002$; Table 1); however, the only PFD that remained associated with a history of sexual abuse in the multivariable analysis was chronic pelvic pain (odds ratio [OR] 2.15, 95% confidence interval [CI] 1.2–3.8; Table 2).

We then grouped the list of PFDs into four categories: urinary incontinence, anal incontinence, symptomatic pelvic organ prolapse, or pelvic floor pain disorder. Patients were stratified by the number of PFDs for which they were diagnosed, as well as with whether they had a history of sexual abuse. We did not find a difference in the number of PFDs between women with and without a history of sexual abuse (all $P > 0.05$).

Discussion

We found that a history of sexual abuse was common among a cohort of women seeking care for PFDs and that the abuse was associated with a history of chronic pelvic pain but not with other PFDs. This finding is consistent with studies exploring the relation between sexual abuse and chronic pelvic pain.^{12,13} A systematic review and meta-analysis examining the association between a sexual abuse history and lifetime diagnosis of somatic disorders found a positive association between sexual abuse and chronic pelvic pain, with an OR of 2.73 (95% CI 1.73–4.30).¹⁴ This is in agreement with the adjusted OR of 2.15 (95% CI 1.2–3.8) found in our study.

Our study does not support several other studies that have demonstrated a positive relation between a history of sexual abuse and the specific diagnosis of painful bladder syndrome. A cohort study identified 87 women with painful bladder syndrome and reported that 58% of these women had a history of sexual abuse and recognized that more research is needed.¹⁰ A survey of 406 women with interstitial cystitis and 5000 age-matched controls demonstrated a positive association between interstitial cystitis and sexual abuse.¹⁵ Although we included a large cohort of women with pelvic floor dysfunction, our study was likely underpowered to detect a positive association between painful bladder syndrome and sexual abuse.

Unlike prior studies, we did not find a significant association between OAB and a history of sexual abuse. Jundt and colleagues described a positive association between OAB and physical and sexual abuse. In their study, the total number of abused women in the OAB group was 26/85 (30.6%) compared with 18/101 (17.8%) in the stress urinary incontinence group which was comparable to 10/57 (17.5%) of the control group without stress urinary incontinence.⁹ The same study evaluated physical and sexual abuse as one entity and had more detailed questions regarding sexual and physical abuse than those used in our study. Although we studied a larger cohort with a range of PFDs, we did not observe an association between OAB and a history of sexual abuse.

Sexual abuse has been associated with multiple pelvic floor complaints.¹¹ Beck et al broadly divided PFDs into urologic, gastrointestinal, and sexual categories. Women were then categorized as having one to three disorders, and 23% of patients in the cohort reported a history of sexual abuse; women with a history of sexual abuse had significantly more complaints in all three domains of the pelvic floor.¹¹ We assigned pelvic floor dysfunction diagnoses more finely and did not observe that number of disorders was associated with an increased likelihood of history of sexual abuse. Nevertheless, we found that a history of sexual abuse was common in our cohort, stressing the importance of obtaining this history.

Because the physician verbally administered the questionnaire, we did observe a bias in whom we asked about a history of sexual abuse. We surmise that we were less likely to ask older women and non-Hispanic women about their sexual abuse history, despite rates of sexual abuse in these subpopulations being equal to their younger Hispanic counterparts. This bias could stem from the knowledge that minority women are more frequently sexually abused than nonminority women.¹⁶ We have experienced discomfort in asking older women about sexual abuse, assuming that it is not necessary to discuss something that could have occurred many years ago; however, a complete medical history should be obtained from all patients, regardless of age or ethnicity.

Although the univariate analysis did identify an association between sexual abuse and fecal incontinence, this relation did not stand in the multivariable analysis. The relation of fecal incontinence to sexual abuse may have more to do with symptom perception and severity. Imhoff et al found that women who have experienced sexual abuse or sexual assault have greater symptom severity for fecal incontinence,¹⁷ again underscoring the importance of asking all patients about a history of sexual abuse.

A limitation to our study is that the standard questionnaire included only one question pertaining to sexual abuse. We did not specifically define the type, duration, or extent of abuse with the patient. Other limitations are the retrospective design and the exclusion of non-English speakers. In addition, women who experienced sexual abuse may choose not to disclose an abuse history when asked during a new patient intake, and underreporting of sexual abuse history may have skewed our results. The strengths of our study include a large sample size, standardized histories and physical examinations, and a significant representation of Hispanic women. This study also included women with anal incontinence, which is novel.

Eliciting a history of sexual abuse gives healthcare providers an opportunity to investigate whether the patient has received treatment or therapy or whether she needs additional access to resources. Like other investigators, we have found a strong association between history of sexual abuse and chronic pelvic pain; obtaining an abuse history is particularly important in these individuals presenting for treatment of a PFD.

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Key Points

- A history of sexual abuse is common in women presenting to clinicians with pelvic floor complaints.
- Chronic pelvic pain had the strongest association with sexual abuse.
- Women who were older and non-Hispanic white were less likely to be asked about a history of sexual abuse.

Table 1

Patient characteristics of women with and without a history of sexual abuse

Demographic	Negative history of sexual abuse, n = 1048	Positive history of sexual abuse, n = 213	P
Age, y, mean $\pm$ SD	54.7 $\pm$ 15	50.4 $\pm$ 12	<0.001
BMI, kg/m ²	30.1	31.5	0.03
Non-Hispanic	58	61	0.36
Hispanic	4242	39	0.36
Parity, mean $\pm$ SD	2.5 $\pm$ 1.9	2.2 $\pm$ 1.5	0.01
Depression	12	31	<0.001
Anxiety	13	36	<0.001
Current use of antidepressants	13	28	<0.001
Current use of anxiolytics	14	40	<0.001
Public insurance recipient	16	31	0.001
Current use of alcohol	34	30	0.26
Tobacco use	14	29	<0.001
Illicit drug use	1	3	0.18
Presently with a sexual partner	58	47	0.003
Sexually active	52	51	0.73
Previous hysterectomy	34	71	0.06
Stage 2 Pelvic Organ Prolapse Quantification	83	76	0.016
Stress urinary incontinence	(n = 599) 57.2	(n = 133) 62.4	0.16
Overactive bladder	(n = 532) 50.8	(n = 119) 55.9	0.17
Fecal incontinence	(n = 110) 10.5	(n = 33) 15.5	0.037
Symptomatic pelvic organ prolapse	(n = 397) 37.9	(n = 64) 30.0	0.03
Painful bladder syndrome	(n = 50) 4.7	(n = 14) 6.5	0.28
Chronic pelvic pain	(n = 54) 5.2	(n = 23) 10.8	0.002
No. PFDs			0.16
1	n = 695	n = 130	
2	n = 315	n = 72	
3	n = 35	n = 10	
4	n = 0	n = 1	

Data presented as percentages unless otherwise noted. BMI, body mass index; PFDs, pelvic floor disorders.

Table 2

Multivariable analysis between sexual abuse and PFDs

History of sexual abuse	OR (95% CI)
Age	1.03 (1.01–1.04)
Anxiety	2.07 (1.18–3.66)
No partner	1.82 (1.07–3.11)
Chronic pelvic pain	2.15 (1.2–3.8)
Fecal incontinence ^a	1.10 (0.69–1.44)

* Not significantly associated with sexual abuse in multivariable analysis. CI, confidence interval; OR, odds ratio; PFDs, pelvic floor disorders.