Self-Reported Vulvar Pain Characteristics and Their Association with Clinically Confirmed Vestibulodynia

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Abstract

Objective: We evaluated a series of questions pertaining to vulvar pain symptoms to determine their association with a localized vulvodynia (vestibulodynia) diagnosis in women from the general population.

Methods: A sample of 12,435 women completed a self-administered screening questionnaire for the presence of specific types and characteristics of vulvar pain lasting 3 months or longer. Sensitivity, specificity, and predictive values were calculated for each cross-classification of vulvar pain type and characteristic, using as the gold standard 121 subjects with a clinically confirmed vestibulodynia diagnosis.

Results: Relative to women with clinically confirmed vestibulodynia, 83% reported >10 episodes of pain on contact at the time of tampon insertion, intercourse, or pelvic examination, and 83% also reported pain on contact that limited or prevented sexual intercourse. These strong associations with a vestibulodynia diagnosis were not observed with respect to women who reported vulvar pain symptoms of burning or knifelike pain, or vulvar pain characteristics of continuous versus intermittent pain, or provoked versus spontaneous pain.

Conclusions: Our findings suggest that a small number of symptoms may be suitable for identifying a large proportion of women suffering from vestibulodynia which may be ideal for the development of an effective screening test in the future. However, we also recognize that a large proportion of women experiencing vulvar pain symptoms will not meet the diagnostic criteria for vestibulodynia. Thus, implementing such a screening procedure as part of a routine examination or testing would require a subsequent pelvic examination to confirm a vestibulodynia diagnosis and to rule out other known explanations for vulvar pain.

Introduction

RECENT POPULATION-BASED STUDIES have shown that unexplained vulvar pain is a common condition among reproductive aged women, with prevalence of 10–28%.^{1–3} One of these studies also showed that 39% of women who suffer from vulvar pain fail to seek treatment.¹ Although a large proportion of these women likely meet the clinical criteria for vulvodynia, the true prevalence of this disorder is unknown. However, even if only 25% of women with vulvar symptoms met the clinical criteria for vulvodynia, that rate would translate into several million women suffering from this condition annually. Thus, educating women in the general population regarding symptoms that may be associated with vulvodynia, and the importance of seeking care to minimize the physical symptoms and the emotional distress and social dysfunction associated with this disorder, is of

great public health concern. Recognition of the importance of this public health problem came to fruition recently with the NIH Office of Research on Women's Health launching of a congressionally mandated Vulvodynia Awareness Campaign.

A recently published study attempted to estimate the accuracy of self-reported vulvar pain as a predictor of vulvodynia incidence.⁴ The authors used a health registry of women volunteers, recruited at health fairs and meetings for future research participation, as a source population for an internet-based survey of vulvar complaints. In this study of approximately 1100 subjects, 82% of 33 women with clinically confirmed vulvodynia self-reported vulvar pain for more than 3 months (sensitivity), and 97% of women classified as asymptomatic controls did not report a history of 3 months of vulvar pain (specificity). The authors also showed that, of 28 women predicted to have vulvodynia, 27 were confirmed by

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interview and examination criteria. Although the authors conclude from this study that self-reported vulvar symptoms may be a reliable and valid marker for vulvodynia, they also recognize limitations that include the lack of a population-based sample and a limited number of validated cases available for the analysis. A further limitation was the limited number of questions related to vulvar pain assessed as predictors of vulvodynia diagnosis.

We have an opportunity to add to these findings from a population-based cross-sectional survey of women from the Boston metropolitan area who were screened for the presence of more than 20 different types of vulvar pain symptoms and then assessed for clinically confirmed vulvodynia, largely of localized origin (vestibulodynia). Through these analyses, we sought to identify a range of questions that may be associated with vestibulodynia that would help women determine when they should seek care for their vulvar pain symptoms.

Methods

This study was approved by the Human Subjects Review committees at both Brigham and Women's Hospital and the University of Minnesota.

Population-based sampling frame

Through the use of annually updated state law-required Massachusetts town and city census registries (Massachusetts Town Books), women 18–64 years of age were randomly sampled from three ethnically diverse Boston neighborhoods based on zipcodes, and also from two west-suburban communities. Further details on the sampling methods and procedures can be found elsewhere.¹ Over a 55-month screening period (January 2001 to September 2005), 24,750 women 18–64 years of age were mailed a one-page, double-sided, optically scannable questionnaire to assess current and past chronic vulvar pain (Fig. 1). Two separate mailings (4 weeks apart) and one telephone follow-up were used to increase participation rates. There were 2,059 non-existent households, 745 non-English speaking residents, and 3,443 households in which we could not determine whether an eligible woman resided after two mailings and telephone follow-up. We received completed questionnaires from 12,435 (67%) of the 18,503 women who we believed had an opportunity to complete the screener questionnaire.

From the 12,435 women completing the questionnaire, we identified 56 clinically confirmed symptomatic cases of vulvodynia, described in detail elsewhere.⁵ Briefly, as shown in Figure 1, at the time of population-based screening, 662 (5.3%) were experiencing current vulvar pain symptoms (based on row G, Appendix 1). Based on the evaluation of the initial screening questionnaire by our clinical colleague, further vulvar pain assessment was needed to rule out other vulvar conditions often misclassified as vulvodynia, including sexually transmitted diseases (STDs), yeast/bacterial infections, vulvar skin problems, misclassified pelvic disorders, estrogen related dyspareunia, and inflammatory vaginitis. A telephone follow-up interview was completed on 444 (67%) of the 662 women experiencing vulvar symptoms. Questions included the effectiveness of vaginal creams in alleviating symptoms, nocturnal awakenings, use of self-treatments, specific pain location, consistency of pain since the start of sexual intercourse, use of and effectiveness of lubricants, and use of

hormone replacement therapy. Of those 444 women, 256 were classified by our clinical expert as likely to meet the International Society for the Study of Vulvovaginal Diseases (ISSVD) criteria for provoked vestibulodynia. Because there continues to be inconsistencies in the use of the term "vulvodynia," and given that the large majority of vulvar pain reported was provoked and localized, for ease of discussion, we refer to this as "vestibulodynia" throughout the manuscript. Although not a requirement for participation in this study, we were able to have 73 of these women come in for a clinical examination and 56 (78%) were clinically confirmed as vestibulodynia based on a pelvic examination that applied Friedrich's diagnostic criteria.⁶

In addition to the 56 clinically confirmed population-based cases, we also identified a consecutive series of 65 clinically confirmed cases from a clinic specializing in vulvovaginal disorders. These women resided in similar communities as those identified from the general population and retrospectively completed both the initial self-administered and telephone administered questionnaires.

Measures of chronic vulvar pain

Data for this analysis came from the self-administered screening questionnaire that was approved by the Brigham and Women's Hospital Human Subjects Review Committee (Appendix 1). This initial screening questionnaire was designed to assess current and past chronic lower genital tract symptoms consistent with generalized and localized vulvar pain. Questions were developed based on those generally asked by clinicians when patients are seen at vulvovaginal specialty clinics. The questions that clinicians ask are based on symptoms that patients themselves use to describe their pain over and over again that in the clinicians' mind are consistent with a vestibulodynia diagnosis.

The instrument assessed four types of lower genital tract discomfort that persisted for 3 months or longer, including itching, burning, periodic knife-like or sharp pain, and excessive pain on contact to the genital area. For each of these symptoms, further questions asked for information on age at first onset, frequency of episodes experienced, whether women experienced symptoms continuously or intermittently, whether they were provoked or spontaneous, whether the discomfort occurred during intercourse, and whether the discomfort limited or prevented sexual intercourse. We used the data from this questionnaire for our assessment of responses associated with clinically confirmed vestibulodynia.

We used as the gold standard for vestibulodynia diagnoses, clinical confirmation for estimating the sensitivity, and a negative screening for all four types of vulvar pain questions mentioned above as the gold standard in estimating specificity. There were 121 women identified from both the general population ($N = 56$) and from a vulvovaginal specialty clinic ($N = 65$). We defined a non-vestibulodynia diagnosis as those women who were either screened negative with the mailed screening questionnaire or screened negative after the telephone follow-up interview.

Statistical analysis

Single symptom-related questions on the characteristics of vulvar pain (rows in Appendix 1) by type of pain (columns in Appendix 1) were assessed individually as possible predictors

FIG. 1. Flow chart for vulvar pain screening among women in the Boston area general population.

of clinically confirmed vestibulodynia. Characteristics included number of episodes (question B, Appendix 1), pattern of occurrence (question C, Appendix 1), provocation (question D, Appendix 1), occurrence during sexual intercourse (question E, Appendix 1), and discomfort that limited or prevented intercourse (question F, Appendix 1). The presence of symptoms within the past 3 months (question G, Appendix 1) could not be used in this analysis, since only women with current symptoms had an opportunity to be enrolled in the study. Responses to each of the five questions on characteristics above were evaluated within three of the four types of pain (burning, knife-like pain, or pain on contact; questions 18–20, Appendix 1). Genital area itching (when reported

without the presence of burning, knife-like pain, or pain on contact) was not included since its presence as the only vulvar discomfort is used more to rule-out rather than rule-in a vestibulodynia diagnosis.

We calculated sensitivity, specificity, and positive predictive values for each of the vulvar pain symptom types and characteristics. In order to estimate a distribution of positive predictive values associated with each cross-classification of symptom and characteristic, we first estimated the upper bound of vestibulodynia prevalence and chose 3% based on the highest estimate reported in the literature. We then calculated the prevalence based on the probabilities of being positive for vulvar pain in the mail survey, the telephone

survey, and the clinical exam. This estimate was determined as 2.4%. The lower bound is then determined by default, and these prevalence bounds were used to estimate the range of positive predictive values for each dichotomous classification. Point estimates and 95% confidence intervals were calculated, and all analyses were conducted in S-PLUS version 6.2.⁷

Results

In Table 1, we show the demographic characteristics of our population-based sample in comparison to U.S. Census data. In general, the age, race, and marital distribution of our sample is reasonably similar to that of Boston-area U.S. Census data pertaining to this region. Although our sample was substantially more educated than the region as a whole, we previously reported no association between educational attainment and self-reported vulvar pain symptoms.¹

Table 2 lists the characteristics of symptoms for each pain type as illustrated in the self-administered screening questionnaire (Appendix 1). Also provided are their discriminatory characteristics with respect to sensitivity, specificity, and positive predictive value (PPV). We used only the initial self-administered screener questions for this analysis since this data applies to women with both current and past history of symptoms. When we assessed the five characteristics of genital tract symptoms (number of episodes, pattern of occurrence, provocation, occurrence during sexual intercourse, or discomfort limiting sexual intercourse) within each category of pain (burning, knife-like, or pain on contact), two pairs of questions had excellent discriminatory ability for vestibulodynia diagnosis. They were (1) >10 episodes (characteristic)

of pain on contact (type of pain; sensitivity = 83%, specificity = 95%), and (2) pain on contact (type of pain) that limited or prevented sexual intercourse (characteristic; sensitivity = 83%, specificity = 94%). Increasing episodes of burning or knife-like pain were not highly associated with a vestibulodynia diagnosis, nor were the characteristics of continuous versus intermittent pain, or provoked versus spontaneous pain.

The questions associated with the highest sensitivity were not those associated with the highest positive predictive value. In fact, many questions associated with the highest positive predictive values had sensitivities well below 50%. There was, however, a paired question of >20 episodes (characteristic) of pain on contact (type of pain) that was associated with a positive predictive value of nearly 50%, a sensitivity of 74%, and a specificity of 98%.

In our earlier research, we learned that women who choose to seek treatment (identified through vulvar specialty clinics) may differ from those identified in the general population with respect to factors that may relate to potential risk factors for vestibulodynia. For example, we recently showed that clinic-identified cases began oral contraceptive use at an earlier age and maintained use for a significantly longer period of time than population-identified women with vestibulodynia.⁵ To see whether this difference held true with respect to questions associated with a vestibulodynia diagnosis, we stratified the 121 clinically confirmed cases by those identified through the general population ($n = 56$) and those identified through a clinical setting ($n = 65$). The discriminatory ability for >10 episodes of pain on contact was higher among clinically identified cases (sensitivity = 89%) compared to cases identified from the general population (sensitivity = 77%). The same held true for pain on contact that limited or prevented intercourse (sensitivity = 89% and 75%, respectively). The specificity remained virtually the same. Although the sensitivity for these screening questions was somewhat lower among the clinically confirmed general population cases, it was still quite high and quite discriminatory.

Lastly, we assessed whether a combination of ≥ 10 episodes of pain on contact with self-reported discomfort at the time of sexual intercourse was more highly associated with vestibulodynia than either of these variables alone. As shown in Table 3, ≥ 10 episodes of pain on contact without the presence of pain at the time of sexual intercourse, and pain at the time of intercourse without the presence of ≥ 10 episodes of pain on contact, were poorly associated with vestibulodynia. However, the presence of both 10 or more episodes of pain on contact in the presence of pain at the time of sexual intercourse was associated with a respectable sensitivity of 78% and a PPV estimate of 11–45%.

Discussion

Our data suggests that there are several singular and combinations of questions that can be asked of women in the general population that are highly associated with vestibulodynia prevalence. The type of pain most commonly associated with vestibulodynia was pain on contact at the time of intercourse, insertion of tampon, or at the time of a pelvic exam. Even within those that reported pain on contact, there was little difference in sensitivity by whether or not it occurred all the time or sporadically. We observed that burning

TABLE 1. DEMOGRAPHIC CHARACTERISTICS OF THE POPULATION-BASED SAMPLE ($N = 12,432$) IN COMPARISON TO BOSTON-AREA U.S. CENSUS DATA

Characteristic	No. of women	%	Massachusetts U.S. Census %
Age group, years			
55–64	2026	16.3	14
45–54	3231	26.0	22
35–44	3853	31.0	27
25–34	2472	19.9	23
18–24	853	6.9	14
Race			
Not stated	1325	10.7	—
Other ^a	381	3.1	1
Asian	272	2.2	4
Hispanic	595	4.8	7
African-American	1154	9.3	6
White-non Hispanic	8708	70.0	82
Marital status			
Not stated	74	0.6	—
Separated/divorce/widow	1689	13.6	16
Never married	3291	26.5	29
Married	7381	59.4	56
Education			
Not stated	294	2.4	—
College graduate/graduate	7705	62.0	36
Some college/vocational	2634	21.2	31
High school	1802	14.5	33

^aIncludes all other non-white race categories.

TABLE 2. DISCRIMINATORY CHARACTERISTICS OF VULVAR PAIN SCREENING CLASSIFICATIONS^a
BASED ON PAIN SYMPTOM VARIABLES

<i>Symptoms</i>	<i>Sensitivity (%)</i>	<i>Specificity (%)</i>	<i>PPV (%)^b</i>
Number of episodes			
>10 episodes of burning versus less than 10 or none	36 (27, 44)	99 (99, 99)	47 (35–60)
>20 episodes of burning versus less than 20 or none	32 (24, 41)	99 (99, 100)	44 (32–58)
>10 episodes of knife-like pain versus less than 10 or none	28 (20, 36)	98 (98, 98)	25 (19–33)
>20 episodes of knife-like pain versus less than 20 or none	20 (13, 27)	99 (99, 99)	33 (22–47)
>10 episodes of pain on contact versus less than 10 or none	83 (77, 90)	95 (95, 96)	29 (24–34)
>20 episodes of pain on contact versus less than 20 or none	74 (66, 81)	98 (97, 98)	48 (40–55)
Pattern of occurrence			
Burning occurred all the time versus sporadically or none	15 (9, 21)	100 (99, 100)	27 (17–40)
Burning occurred sporadically versus all the time or none	25 (17, 32)	98 (98, 98)	23 (17–30)
Knife like pain occurred all the time versus sporadically or none	3 (0, 6)	100 (99, 100)	6 (2–14)
Knife like pain occurred sporadically versus all the time or none	31 (22, 39)	97 (97, 98)	20 (15–26)
Pain on contact occurred all the time versus sporadically or none	49 (40, 58)	98 (98, 98)	37 (30–45)
Pain on contact occurred sporadically versus all the time or none	42 (33, 51)	93 (92, 93)	13 (10–16)
Provocation			
Burning was spontaneous versus provoked or not at all	33 (25, 41)	98 (98, 98)	29 (22–36)
Burning was provoked versus spontaneous or not at all	24 (16, 32)	99 (99, 99)	37 (25–51)
Knife-like pain was spontaneous versus provoked or not at all	26 (18, 33)	97 (97, 98)	17 (13–23)
Knife-like pain was provoked versus spontaneous or not at all	19 (12, 26)	99 (99, 99)	32 (21–45)
Occurrence during sexual intercourse			
Burning at time of intercourse versus at other times or none	33 (25, 41)	98 (98, 99)	29 (22–36)
Burning at other times versus at time of intercourse or none	37 (29, 46)	98 (98, 98)	31 (24–39)
Knife-like pain at time of intercourse versus at other times or none	23 (16, 31)	99 (99, 99)	36 (24–50)
Knife-like pain at other times versus at time of intercourse or none	32 (24, 41)	97 (97, 98)	21 (15–26)
Discomfort limiting sexual intercourse			
Burning prevented or limited intercourse versus not	36 (27, 44)	98 (98, 99)	30 (23–38)
Knife-like pain prevented or limited intercourse versus not	23 (16, 31)	99 (99, 99)	36 (24–50)
Pain on contact prevented or limited intercourse versus not	83 (76, 89)	94 (94, 95)	25 (21–30)

^aThe classifications are based on questions B–F from the questionnaire (Fig. 2) using clinically confirmed vulvodynia cases ($N = 121$). Non-cases of vulvodynia defined as screened negative after the mailed screening questionnaire or at the telephone interview ($N = 11,961$).

^bPositive Predictive Value (PPV) based on an estimated prevalence of 0.024 taken from the product of the probability of being positive on the mail survey, the telephone survey, and at the time of the clinical confirmation examination. An upper 95% credibility limit of 0.03 was imposed based on cited literature. Lower prevalence bound was inferred from mean prevalence and set upper bound.

and knife-like pain had lower sensitivities than that of pain on contact.

In this analysis, we made the assumption that the upper bound of vulvodynia prevalence in the general population may be as high as 3% based on a number of studies in the literature. Under that assumption, many of our proposed questions yielded positive predictive values greater than 25% with some combinations near 50%. We would encourage researchers interested in pursuing new prospective studies of screening efficacy to build upon these questions to validate these findings.

The newest ISSVD classification for vestibulodynia is based on the site of the pain, whether it is localized or generalized, and whether it is provoked or unprovoked.⁸ Our data suggests that localized pain on contact was more highly associated with a diagnosis of vestibulodynia in this population compared with generalized burning or knife-like pain. In addition to self-reported pain on contact, the next most important descriptor of pain associated with vestibulodynia incidence appeared to be pain that prevented or limited intercourse in women who had experienced >10 episodes of pain over the course of their lifetime.

TABLE 3. DISCRIMINATORY CHARACTERISTICS OF CROSS-CLASSIFICATION OF FREQUENCY OF PAIN ON CONTACT
AND DISCOMFORT LIMITING SEXUAL INTERCOURSE

<i>Number of episodes of pain on contact</i>	<i>Discomfort limiting sexual intercourse</i>	<i>Sensitivity (95% CI, %)</i>	<i>Specificity (95% CI, %)</i>	<i>PPV range^a</i>
<10 or none	No	12 (6, 17)	7 (7, 8)	0–0
<10 or none	Yes	5 (1, 9)	97 (97, 98)	1–6
10 or more	No	6 (2, 10)	98 (98, 99)	2–10
10 or more	Yes	78 (70, 85)	97 (97, 97)	11–45

^aPositive Predictive Value (PPV): Lower bound for PPV based on an estimate of 0.5% prevalence of vulvar pain, upper bound based on an estimate of 3.1%. Upper bound for prevalence of vulvar pain was estimated from the product of the probability of being positive on both the mail survey and the telephone survey. Lower bound for prevalence of vulvar pain was estimated from the product of the probability of being positive in the mail survey, the telephone survey and the clinical exam.

In the recent study by Reed et al.,⁴ 81.8% of women clinically diagnosed with vestibulodynia self reported "vulvar pain for 3 months or longer." Furthermore, of those considered healthy controls, 96.6% reported no history of vulvar pain for ≥ 3 months. Our population-based data supports the use of very few questions to achieve high screening efficacy for this debilitating condition. Our study also examines several other questions not reported in the study by Reed et al. that may also be useful in the development of an educational program to screen women in the general population who may be suffering from this condition.

The questions proposed for screening women in the general population should be consistent with those used to diagnose women in clinical settings. Women who screen positive should be encouraged to seek a clinical diagnosis from a health professional provider who can then use the ISSVD approved approach to confirm a diagnosis by ruling out other known vulvar pain conditions. Given that we have already reported that 39% of women with self-reported vulvar pain for ≥ 3 months fail to seek treatment,¹ it is clear that some form of educational program around awareness of this condition is warranted.

Although our study has several strengths, including its population-based sample, a wide breadth of questions assessed, and the size of the screened population, there are some limitations that warrant discussion. Our study was designed to screen and enroll as cases of vestibulodynia, women from the general population experiencing current vulvar pain symptoms. Thus, women with a ≥ 3 -month history of vulvar pain, but who were not symptomatic at the time of the screening, did not have an opportunity to be enrolled in the study, and thus could not be assessed as part of this screening analysis, even though many of these women might have met the clinical criteria for vestibulodynia had they been clinically assessed. Given that women are likely to have cyclical variation in their vulvar pain, our findings can only be applied to women in the general population with current vulvar pain symptoms. Furthermore, although we achieved a reasonable response rate on our initial self-administered screener questionnaire (67%), we cannot determine whether the non-responders would have been more or less likely to self-report current vulvar pain symptoms. However, the age distribution of responders and non-responders were similar. We recognize that our selection of questions for screening are by no means inclusive of the entire range of symptoms that patients themselves use to describe their pain. Our questions were based on those that a selected group of clinical experts in the field indicated to us were those that represent the descriptors used by their patients over and over again that ultimately correlated with a vestibulodynia diagnosis. Future studies should conduct a systematic assessment of all symptoms consistent with vestibulodynia diagnoses. Although the few questions we used were highly correlated with a clinically confirmed diagnosis, a more complete assessment of symptoms could improve the predictive value in future studies.

Our specificity was defined based on a negative screening of all four types of vulvar pain stated above, or after telephone follow-up to clarify misclassified vulvar pain. We cannot rule out that some of these women may in fact suffer from vulvar pain and choose not to report its presence. However, among 240 controls selected as part of a case-control study based on

this same negative screening on all four types of vulvar pain, all 240 confirmed a lack of a history of vulvar pain at the time of personal interviews. In addition, a third of these subjects agreed to provide vulvovaginal specimens which when collected elicited no pain or discomfort. In a small study by Reed et al.,⁴ of 34 women with no self-reported vulvar pain, 28 were found to be completely asymptomatic at the time of the clinical examination. It is unclear, however, whether the remaining 6 met the criteria for vestibulodynia. The WHO estimates that 8–22% of women suffer from dyspareunia.^{9,10} Given that a large proportion of the incidence of dyspareunia can be attributable to known causes, the smaller proportion of these women will meet the ISSVD diagnostic criteria for vestibulodynia. Nevertheless, if, for example, a small proportion of women self-reporting no history of vulvar pain are truly misclassified as having vestibulodynia, our estimates of sensitivity could be substantially lower, though our specificity would not dramatically change.

We recognize that predictive value measures are generally of greater concern and importance to clinicians involved in the screening of chronic diseases. However, this measure necessarily varies from population to population since it depends on the underlying prevalence of the condition. Unlike predictive value measures, sensitivity and specificity are independent of population-based prevalence and are more generalizable. Thus, we have chosen to be very careful not to overstate predictive value measures, while at the same time providing a positive predictive value estimate based on a conservative prevalence estimate of the condition in the Boston metropolitan area.

Conclusions

In summary, our data supports that of Reed et al.,⁴ which suggests that a few selected questions could potentially be effectively used to screen women at substantial risk of having vestibulodynia. Implementing this assessment could be accomplished in both a population-based, as well as a clinical environment during routine examinations or testing. Given the magnitude of this problem based on recent community-based studies, this is a relatively inexpensive way to bring help to women who suffer from this condition in isolation.

Disclosure Statement

The authors cite no conflicting financial interests.

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Appendix 1

Questionnaire used to assess vulvar pain symptoms among women in the Boston-area general population

TYPE OF PAIN →

	Q17	Q18	Q19	Q20
Please answer questions 17-20 first	Did you ever experience itching in your genital area that persisted for 3 months or longer? ___ No ___ Yes (Answer A-G below)	Did you ever experience burning in your genital area that persisted for 3 months or longer? ___ No ___ Yes (Answer A-G below)	Did you ever experience periodic knife-like or sharp pain in your genital area that persisted for 3 months or longer? ___ No ___ Yes (Answer A-G below)	Did you ever experience excessive pain on contact to your genital area? For example, upon insertion of a tampon, at the time of sexual intercourse, or during a pelvic examination? ___ No ___ Yes (Answer A-G below)

IF YOU ANSWERED NO TO EACH QUESTION ABOVE, YOU HAVE FINISHED THE QUESTIONNAIRE. IF YOU ANSWERED YES TO ANY OF THE QUESTIONS ABOVE, PLEASE ANSWER QUESTIONS A-G BELOW FOR EACH PARTICULAR DISCOMFORT YOU EXPERIENCED

	Itching	Burning	Knife-like Pain	Pain on contact
A. How old were you when you first noticed this problem	Age ____ ___ <10 ___ 10-20 ___ 21-30 ___ >30 ___ All the time ___ Off and on	Age ____ ___ <10 ___ 10-20 ___ 21-30 ___ >30 ___ All the time ___ Off and on	Age ____ ___ <10 ___ 10-20 ___ 21-30 ___ >30 ___ All the time ___ Off and on	Age ____ ___ <10 ___ 10-20 ___ 21-30 ___ >30 ___ All the time ___ Off and on
B. Since your first episode, how many episodes have you had?	___ Just came on ___ Caused by something I did ___ Occurred in both situations ___ Only around intercourse ___ At other times only ___ Around intercourse and at other times ___ No ___ Yes	___ Just came on ___ Caused by something I did ___ Occurred in both situations ___ Only around intercourse ___ At other times only ___ Around intercourse and at other times ___ No ___ Yes	___ Just came on ___ Caused by something I did ___ Occurred in both situations ___ Only around intercourse ___ At other times only ___ Around intercourse and at other times ___ No ___ Yes	DOES NOT APPLY
C. When you had this discomfort did you have it all the time or was it off and on?	___ Just came on ___ Caused by something I did ___ Occurred in both situations ___ Only around intercourse ___ At other times only ___ Around intercourse and at other times ___ No ___ Yes	___ Just came on ___ Caused by something I did ___ Occurred in both situations ___ Only around intercourse ___ At other times only ___ Around intercourse and at other times ___ No ___ Yes	___ Just came on ___ Caused by something I did ___ Occurred in both situations ___ Only around intercourse ___ At other times only ___ Around intercourse and at other times ___ No ___ Yes	DOES NOT APPLY
D. When you experienced this discomfort was there generally some event that brought it on, or did it just come on by itself?	___ Just came on ___ Caused by something I did ___ Occurred in both situations ___ Only around intercourse ___ At other times only ___ Around intercourse and at other times ___ No ___ Yes	___ Just came on ___ Caused by something I did ___ Occurred in both situations ___ Only around intercourse ___ At other times only ___ Around intercourse and at other times ___ No ___ Yes	___ Just came on ___ Caused by something I did ___ Occurred in both situations ___ Only around intercourse ___ At other times only ___ Around intercourse and at other times ___ No ___ Yes	DOES NOT APPLY
E. When did this discomfort usually occur?	___ Just came on ___ Caused by something I did ___ Occurred in both situations ___ Only around intercourse ___ At other times only ___ Around intercourse and at other times ___ No ___ Yes	___ Just came on ___ Caused by something I did ___ Occurred in both situations ___ Only around intercourse ___ At other times only ___ Around intercourse and at other times ___ No ___ Yes	___ Just came on ___ Caused by something I did ___ Occurred in both situations ___ Only around intercourse ___ At other times only ___ Around intercourse and at other times ___ No ___ Yes	DOES NOT APPLY
F. Did this problem ever limit or prevent you from having intercourse?	___ No ___ Yes	___ No ___ Yes	___ No ___ Yes	___ No ___ Yes
G. Have you experienced this problem within the last 3 months?	___ No ___ Yes	___ No ___ Yes	___ No ___ Yes	___ No ___ Yes