Provoked Vestibulodynia: Diagnosis, Self-Reported Pain, and Presentation During Gynaecological Examinations

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Abstract

Objective: To explore factors associated with the diagnosis of provoked vestibulodynia (PVD) through (1) self-reported pain characteristics and (2) Friedrich's criteria (vestibular pain during sexual activity/gynaecological examination). We also identified cases in which incorrect diagnoses were assigned and explored group differences in gynaecological examination presentation and associations with self-reported pain.

Methods: Data were extracted from nine studies conducted in our research laboratory. Information obtained during a telephone interview and a standardized gynaecological examination was compiled for 106 participants with vulvar pain and 106 pain-free control participants, matched for age, hormonal contraceptive use, and parity.

Results: Cohen's kappa (0.78) indicated substantial agreement (87.3%) between the telephone interview group categorization and diagnosis after the gynaecological examination. A discriminant function analysis yielded one significant function: Friedrich's first two criteria correctly classified 84.2% of cases, accounting for 76.0% of group membership variance. Of note, those in the other genital pain group were most likely to have received an incorrect diagnosis following the telephone interview ($P < 0.001$). Paired-samples *t* tests showed that those with pain reported lower pain intensity during the gynaecological examination than during intercourse ($P < 0.001$) and that intercourse pain was not necessarily related to pain during the examination. However, many participants (72.8%) indicated that the pain elicited during the cotton swab test was similar to the pain they felt with intercourse.

Conclusion: These results support the use of a targeted clinical interview and the evaluation of vestibular pain during sexual activity and the gynaecological examination for diagnosing PVD. Caution should be exercised when a patient presents with genital pain symptoms other than those typically observed in PVD. Furthermore, the cotton swab test may underestimate the degree of pain regularly experienced.

Key Words: Symptom assessment, diagnosis, gynaecological examination, vulvodynia

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Résumé

Objectif : Explorer les facteurs associés au diagnostic de vestibulodynie provoquée (VDP) par : 1) les caractéristiques de la douleur autodéclarée; et 2) les critères de Friedrich (douleur vestibulaire durant les activités sexuelles ou l'examen gynécologique). Nous avons aussi relevé des cas où des diagnostics incorrects ont été posés et exploré les différences entre les groupes quant à la présentation de l'examen gynécologique et aux associations avec la douleur autodéclarée.

Méthodologie : Nous avons extrait des données de neuf études menées dans notre laboratoire de recherche. Les renseignements obtenus durant une entrevue téléphonique et un examen gynécologique normalisé ont été compilés pour 106 participantes souffrant de douleurs vulvaires et 106 participantes témoins sans douleur, jumelées selon l'âge, l'utilisation de contraceptifs hormonaux et la parité.

Résultats : Le kappa de Cohen (0,78) indiquait une concordance substantielle (87,3 %) entre la catégorisation en groupes de l'entrevue téléphonique et le diagnostic après l'examen gynécologique. Une analyse discriminante a mis en évidence une fonction significative : les deux premiers critères de Friedrich ont correctement classifié 84,2 % des cas, ce qui permet de tenir compte de 76,0 % de la variance entre les membres du groupe. Il est à noter que les participantes dans l'autre groupe de douleur génitale étaient plus susceptibles d'avoir reçu un diagnostic incorrect après l'entrevue téléphonique ($P < 0,001$). Des tests t pour échantillons appariés ont montré que celles qui souffraient de douleurs rapportaient une intensité plus faible durant l'examen gynécologique que durant les relations sexuelles ($P < 0,001$) et que la douleur durant ces dernières n'était pas nécessairement liée à la douleur durant l'examen. Cependant, de nombreuses participantes (72,8 %) ont indiqué que la douleur ressentie durant le test avec l'écouvillon était semblable à celle qu'elles ressentaient durant les relations sexuelles.

Conclusion : Ces résultats appuient le recours à une entrevue clinique ciblée et l'évaluation des douleurs vestibulaires durant les activités sexuelles et l'examen gynécologique pour diagnostiquer la VDP. La prudence est de mise quand une patiente se plaint de douleurs génitales autres que celles observées dans les cas de VDP. De plus, le test avec l'écouvillon peut sous-estimer l'intensité de la douleur régulièrement ressentie.

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INTRODUCTION

Millions of women experience idiopathic chronic vulvar pain (i.e., vulvodynia).[1,2] Despite its high prevalence, its substantial impact on mental health, sexual functioning, and relationships;[3] and the fact that diagnostic criteria and tools exist for some subtypes, this condition remains largely misunderstood. Criteria for diagnosing the most common form of vulvodynia (provoked vestibulodynia[4]) were first reported by Friedrich[5] (Table 1). These criteria can be evaluated during the taking of a brief history, a gynaecological examination that consists of the cotton swab test, and tests to rule out pathology.[4,6]

To validate the usefulness of Friedrich's criteria, Masheb et al.[7] established that vestibular pain during the cotton swab test and a speculum examination was associated with a diagnosis of vulvodynia. Similarly, Bergeron et al.[8] found that the presence of self-reported moderate to severe pain during attempted vaginal penetration and during the cotton swab test was most predictive of a diagnosis of PVD. Of note, multiple researchers[7–9] have found that erythema is inconsistently related to the diagnosis of vulvodynia and the presence of pain on palpation/insertion, concluding that this characteristic is of limited use for differential diagnosis.

In addition, previous studies have indicated that self-reported pain alone is highly associated with a confirmed diagnosis of PVD. For example, Harlow et al.[10] noted that women with more than 10 episodes of vulvar pain that affected or prevented intercourse were very likely to be given a diagnosis of PVD during a subsequent clinical examination. Similarly, Reed et al.[11] reported that women who described pain at the opening of the vagina for more than 3 months were very likely to be given a clinical diagnosis of vulvodynia. Thus, even though multiple sources of evidence are required to confirm a diagnosis of PVD, a provisional diagnosis may be confidently determined solely through self-reported pain characteristics aligning with some of Friedrich's criteria.

In this study, we examined the relationships among self-reported pain characteristics, diagnosis, and pain experienced during a standardized gynaecological examination through the following questions:

1. What circumstances produce the most accurate provisional diagnoses?
   a. How accurate are provisional diagnoses based on self-reporting?
   b. How well do Friedrich's criteria predict the diagnosis?
   c. What characterizes women whose diagnosis is incorrect?
2. How do those with no diagnosis, PVD, and other diagnoses present during a gynaecological examination (e.g., anal wink test, pelvic floor muscle tension/tenderness, size of introitus)?
3. What is the relationship between self-reported pain intensity ratings obtained during an interview and ratings obtained during a gynaecological examination?

ABBREVIATIONS

PVD	provoked vestibulodynia
VPI	vestibular pain index

METHODS

Data were extracted from nine studies conducted by the Sexual Health Research Laboratory at Queen's University over 8 years (Health Sciences and Affiliated Teaching Hospitals Research Ethics Board approval numbers PSYC-089—09; PSYC-078—08; PSYC-080—08; PSYC-075—07; PSYC-070—07; PSYC-096—09; REH-452—09; PSYC-057—06; PSYC-061—06). Although the purpose of each study varied, the common theme was assessing pain and psychosocial characteristics of women with PVD. For the current archival study, relevant information was derived from the aforementioned individual study databases and stored in one larger database for statistical analysis.

In response to advertisements for participants to partake in studies about women's health, genital pain, and/or sexual health, potential participants contacted the laboratory to undergo a telephone screening interview to assess eligibility. Exclusion criteria were being under age 18 and the presence of major psychiatric/medical conditions, vaginismus, and other chronic pain conditions including those affecting the vulva, genitalia, or abdomen (e.g., chronic pelvic pain). Inclusion criteria for PVD were moderate to severe pain during intercourse or other contact at the vulvar vestibule for 6 or more months, as determined using pain intensity ratings on a scale from 0 (no pain) to 10 (worst pain ever). On this scale, ratings of 1 to 3 were considered mild, 4 to 6 moderate, and 7 to 10 severe. The inclusion criteria for the "other genital pain" group were mild to severe pain anywhere on the vulva and/or vulvar vestibule for 6 or more months but without meeting the inclusion criteria for the PVD group. The presence or absence of vulvar pain symptoms, their duration and severity, and pain characteristics were noted and considered when classifying participants as those experiencing PVD, other types of genital pain, or no genital pain (control participants). For example, a woman reporting