Psychosomatic Aspects of Vulvodynia

Comparison with the Chronic Pelvic Pain Syndrome

Ruth Bodden-Heidrich, M.D., Volkmar Küppers, M.D., Matthias W. Beckmann, M.D., Murat H. Özörnek, Ilse Rechenberger, M.D., and Hans G. Bender, M.D.

OBJECTIVE: To examine psychosomatic aspects of vulvodynia (VD) in comparison with the chronic pelvic pain syndrome (CPPS).

STUDY DESIGN: Sixty-seven VD patients and 97 CPPS patients were examined with psychological tests (Freiburg Personality Inventory, Gießen Test) and compared with a control group of 34 healthy women. Sociodemographic data and psychoanalytic diagnoses were collected for 36 VD patients and 106 CPPS patients (inpatients). Descriptive statistics, χ² test and multivariate analyses were used.

RESULTS: CPPS patients had significantly higher somatization than VD patients (P < .004). Both CPPS and VD patients, as inpatients, were significantly more depressive than the control group. In milder forms of VD, the patients (outpatients) exhibited no depression. The incidences of sexual abuse and severe psychosocial disturbances were significantly higher in the CPPS group (P < .01).

CONCLUSION: VD and CPPS are two, distinct psychosomatic gynecologic syndromes and indicate psychosomatically oriented therapy. (J Reprod Med 1999;44:411–416)

Keywords: vulvar diseases, vulva, vulvodynia, chronic pelvic pain syndrome.

Introduction

Vulvodynia (VD) is a syndrome involving pain in the region of the vulva for which no cause can be found and is accompanied by psychological stress and sexual dysfunction."11,14,20,23 The term vulvodynia is used to describe chronic sensitivity over a period of six months or more that manifests in the form of a burning sensation, stabbing or cracking pain, or soreness. Differentiation must be made between this disorder and pruritus vulvae.

Chronic vulvar pain usually has an acute phase that may be attributable to an infection. This gradually develops into a chronic syndrome. The pain is individually experienced at different degrees of intensity, depending on the subset of vulvodynia involved in each case. It is, inter alia, the lack of visible...

From the Department of Obstetrics and Gynecology, Heinrich Heine University, Düsseldorf, Germany.

Dr. Bodden-Heidrich and Küppers are Research Fellows.

Dr. Beckmann is Associate Professor.

Mr. Özörnek is Postdoctoral Fellow.

Dr. Rechenberger is Head, Psychosomatic Section.

Dr. Bender is Head.

Address reprint requests to: Ruth Bodden-Heidrich, M.D., Department of Obstetrics and Gynecology, Moorenstrasse 5, 40225 Düsseldorf, Germany (bodden@uni-duesseldorf.de).

Financial Disclosure: The authors have no connection to any companies or products mentioned in this article.

0024-7758/99/4405-0411/$15.00/0 © The Journal of Reproductive Medicine®, Inc.

Journal of Reproductive Medicine®
physical findings in VD that causes it to be assumed that there are psychological causal relationships. As in the case of the chronic pelvic pain syndrome (CPPS), both psychic and somatic causal relation-

Contrary to CPPS patients, VD patients appear to have psychological problems as a result of the symptoms....

ships must be taken into account, irrespective of whether physical evidence is found.\textsuperscript{11,25-28} VD can have a variety of causes. Consequently, the follow-


ing differentiation is made between the subsets\textsuperscript{11,13}: vulvar dermatoses associated with VD (psoriasis, seborrhea, dermatitis, chronic contact dermatitis, lichen simplex, lichen planus, lichen sclerosus), cyclic vulvovaginitis (CVV), the vulvar vestibulitis syndrome (VVS),\textsuperscript{9,13} dysesthetic vulvodynia (DV) and vulvopapillomatosis.

The vulvar vestibulitis syndrome (VSS) (vaginal vestibule dyspareunia syndrome),\textsuperscript{9} also referred to as adenitis, vestibular adenitis and focal vulvitis, is the subset with the highest incidence and is characterized by dyspareunia, point-focal-tension pain during the so-called swab test and different degrees of erythema in the vestibule of the vagina, chiefly in the area of the vaginal glandular ducts.\textsuperscript{3,8,20} In terms of the etiology, recurrent candidiasis,\textsuperscript{9,13} human papillomavirus (HPV) infection and changes associated with HPV have been discussed. However, in the meantime it has been found that there is no causal relationship between VVS and HPV infection.\textsuperscript{4,5,6,24} The early use of oral contraceptives\textsuperscript{2,3} and early menarche, are considered risk factors. However, the symptoms have a deleterious psychological effect on the patients and their relations with their sexual partners. Therefore, in treating the disorder, particular emphasis should be placed on a psychosomatically oriented procedure. Spontaneous remissions are also possible. There is a great risk of overtherapy; destructive forms of treatment should be employed only when absolutely necessary and should never be the preferred method.

CVV is the second-most-frequent subset. The symptoms manifest predominantly, to a more intense degree in younger women in the third decade of life and during the luteal phase, in particular, dyspareunia. A hypersensitive reaction to a Candida antigen is presumed. What must be borne in mind is the fact that the Candida infection is difficult to identify in the symptomatic phase, so a smear for culture should be obtained in the symptom-free phase. Systematic and local long-term treatment with antimycotic agents is most effective.\textsuperscript{23} However, there is a lack of randomized, placebo-controlled studies with which to assess the efficiency of treatment.

DV is also known as essential vulvodynia.\textsuperscript{14} It occurs predominantly in perimenopausal and postmenopausal women. Furthermore, it is noncyclic and evidences more diffuse hyperesthesia. Secondary urethral and rectal symptoms are frequent. The pain is neuraligiform and responds well to low-dosage treatment with tricyclic antidepressives. There is a lack of placebo-controlled studies in this area.

Vulvar papillomatosis can be associated with vulvodynia, and its incidence is very much lower than that of the disorders described above. Earlier it was thought that there may be a causal relationship between this and HPV,\textsuperscript{29}, however, this could not be confirmed by Bergeron.\textsuperscript{3}

Up to now there have been only a few studies on the psychological and psychosomatic aspects of vulvar disorders. Within the framework of a psychometric study, Stewart et al\textsuperscript{28} found that vulvodynia patients are more psychologically disturbed than other vulvar patients. Jadresic et al\textsuperscript{10} examined the prevalence of psychiatric morbidity in the case of essential vulvodynia. On the basis of a low case figure, it appears that the prevalence is only slightly higher as compared to that in other vulvar disorders. Edwards et al\textsuperscript{7} carried out a comparative study on the incidence of sexual abuse in patients with vulvodynia and other vulvar disorders and in other dermatologic patients. No significant difference was found. Others, however, gained the impression that there was a higher incidence of sexual abuse.\textsuperscript{9,27} Both chronic VD and CPPS are gynecologic disorders with psychosomatic implications. As opposed to VD, a great deal of research has been carried out on CPPS. The incidence of sexual abuse is high as far as CPPS is concerned.\textsuperscript{24,25,30-33}

In our study we compared VD patients with CPPS patients and collected sociodemographic data on those treated as inpatients. In addition, psychometric analyses of both outpatients and inpatients were performed and compared with those of a control group of healthy women.
**Patients and Methods**

Sixty-seven patients with chronic vulvodynia (CVPS) and 97 patients with chronic pain in the lower abdomen (CPSS) that had lasted longer than six months were treated as outpatients and, in part, subsequently as inpatients.

Within the context of psychological tests (Freiburg Personality Inventory and Gießen Test), the two clinical groups were compared with a control group of 34 healthy women who attended the clinic for the purpose of early cancer diagnosis and who had no symptoms and an otherwise noncontributory case history. Multivariate analyses, in which particular attention was paid to the variables depression, tendency to somatize and emotional instability, were performed.

In general patients are treated on an outpatient basis. After various treatments and recurrent chronic complaints, they are referred to our special dysplasia clinic, part of our clinic for vulvar diseases. If other outpatient treatment options do not lead to improvement or stabilization of the disease, additional psychosomatic counselling is offered. After primary psychosomatic evaluation, outpatient treatment is offered (36 patients admitted).

Sociodemographic data were collected in respect to 106 inpatients with CPSS and 36 inpatients with CVPS. Both groups of patients had had intense, chronic symptoms for at least six months. The incidence of sexual abuse in the case history was evaluated within the context of psychotherapeutic interviews. This is the first time that diagnoses oriented to the neurosis model were made and analyzed to determine whether there is a specific structural level in CPSS and CVPS. Following submission of the study plan to the ethics commission, the studies were carried out on the basis of information voluntarily provided by the patients and made anonymous.

The statistical methods employed were the Bartlett Box Test, the Komogorov-Smirnov Test and the Shapiro-Wilk Test to check the prerequisites and the $\chi^2$ test, multivariate analysis and logistic regression analysis.

**Results**

One hundred forty-two patients were admitted for inpatient psychosomatic treatment; 106 were suffering from CPSS and 36 from CVPS. The average period of treatment in the case of the CPSS patients was 18 days and, in the case of the CVPS patients, 16 days. Treatment included interdisciplinary diagnosis and therapy as well as daily psychotherapy. Table I shows the sociodemographic data and gynecologic diagnoses. The following factors were evaluated with respect to both groups: (1) whether anyone in the family, including either of the parents, was alcohol dependent; (2) whether the parents had been divorced before the patients were 16 years of age or if there had been a loss of one parent; and (3) whether there had been physical or sexual abuse (Table II). Among the CPSS patients ($n = 106$), 35% of the parents were divorced; in a further 12% of cases, one parent had died during the patient's childhood, and 22% of the patients expressly stated that they had been sexually abused. Twenty-six

<table>
<thead>
<tr>
<th>Disorder</th>
<th>Age (yr)</th>
<th>Level of education</th>
<th>Marital status</th>
<th>Diagnoses</th>
<th>No. (% with diagnosis)</th>
</tr>
</thead>
<tbody>
<tr>
<td>CPSS</td>
<td>34</td>
<td>1.71 (66%)</td>
<td>1.50 (47%)</td>
<td>Without organ diagnosis</td>
<td>40 (38%)</td>
</tr>
<tr>
<td>(n = 106)</td>
<td></td>
<td>2.23 (22%)</td>
<td>2.29 (27%)</td>
<td>Endometriosis</td>
<td>28 (26%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.08 (18%)</td>
<td>3.04 (13%)</td>
<td>Adhesions</td>
<td>21 (20%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.04 (04%)</td>
<td>4.23 (23%)</td>
<td>Cysts</td>
<td>12 (11%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Pelvic inflammatory disease</td>
<td>02 (02%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Cysts and adhesions</td>
<td>02 (02%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Irritable bowel syndrome</td>
<td>01 (01%)</td>
</tr>
<tr>
<td>CVPS</td>
<td>38</td>
<td>1.21 (58%)</td>
<td>1.18 (50%)</td>
<td>Cyclic vulvovaginitis</td>
<td>08 (22%)</td>
</tr>
<tr>
<td>(n = 36)</td>
<td></td>
<td>2.07 (20%)</td>
<td>2.12 (33%)</td>
<td>Vulvovestibulitis</td>
<td>10 (28%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>3.05 (14%)</td>
<td>3.02 (66%)</td>
<td>Dysesthetic vulvodynia</td>
<td>06 (17%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td>4.03 (08%)</td>
<td>4.04 (11%)</td>
<td>Lichen sclerosis</td>
<td>04 (10%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Vulvapapillomatose</td>
<td>06 (17%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Vaginal adenosis</td>
<td>01 (03%)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Vulva: intraepithelial neoplasia</td>
<td>01 (03%)</td>
</tr>
</tbody>
</table>

*Level of education: 1. final examination, secondary modern school; 2. final examination, junior high school; 3. high school matriculation without completing a course of university studies; 4. high school matriculation and completion of a course of university studies.*

*Marital status: 1. married; 2. single; 3. widowed; 4. divorced/separated.*
Table II: Sociodemographic Data on the Family Situation

<table>
<thead>
<tr>
<th>Variable</th>
<th>CPPS</th>
<th>CVPS</th>
<th>( \chi^2 )</th>
</tr>
</thead>
<tbody>
<tr>
<td>Alcoholism in 1 parent</td>
<td>26 (25%)</td>
<td>3 (8%)</td>
<td>0.04</td>
</tr>
<tr>
<td>Parents divorced</td>
<td>37 (35%)</td>
<td>3 (8%)</td>
<td>0.003</td>
</tr>
<tr>
<td>Death of 1 parent</td>
<td>13 (12%)</td>
<td>2 (6%)</td>
<td></td>
</tr>
<tr>
<td>Sexual abuse</td>
<td>23 (22%)</td>
<td>1 (3%)</td>
<td>0.003</td>
</tr>
</tbody>
</table>

Alcoholism: If there was a physical and mental dependency on alcohol that affected the social situation of the family.
Sexual abuse: explicit statement by the patient during psychotherapy that she had been abused.

CPPS patients (25%) stated that their father was alcohol dependent. In comparison, among the CVPS patients (n = 36), the parents of 8% were divorced, a further 6% had lost a parent, and only one patient expressly stated that she had been sexually abused in childhood. The incidence of alcoholism was also lower, reported by three patients.

The diagnoses made within the context of the psychotherapeutic interviews (with internal and external supervision) on the basis of the neurosis model and the structural level show that as compared with CVPS patients, CPPS patients suffer significantly more frequently from the effects of earlier disturbances. Twenty-three (22%) of the CPPS patients had a borderline syndrome, and 4 (4%) had a conversion neurosis with an oedipal conflict. In the case of the CVPS patients, there were only two with a borderline syndrome (6%) and nine with conversion neuroses (25%). The \( \chi^2 \) test showed a significant difference (\( P < .01 \)). Sixty-seven percent of CPPS and 56% of CVPS patients were suffering from neurotic depression.

Ninety-seven CPPS and 67 CVPS patients who were treated as outpatients and, in part, as inpatients were examined on the basis of psychological tests and compared with a control group (CG) (n = 34). Figure 1 shows the results of multivariate analysis. There were significant differences in the CPPS, CVPS and CG groups as far as depression (a variable in FPI and GT), tendency toward somatization and emotional instability are concerned. Both the CPPS and CVPS groups were significantly more depressive than CG. CPPS patients evidenced a significantly higher degree of somatization than CVPS patients.

When depression was analyzed only in the outpatient group, CPPS patients were significantly more depressive (\( P < .01 \)) than the control group, while vulvodynia outpatients with less-intense symptoms were not significantly more depressive (\( P = .448 \)).

Discussion

This study showed that CPPS and VD are two different psychosomatic entities. Sociodemographic data could be collected within the context of interdisciplinary, psychosomatically oriented treatment and used in neurosis-oriented diagnoses. These have not been described before in the literature. Measured on the basis of the psychoanalytic model of development phases, CPPS patients evidenced a so-called early disturbance, such as a borderline syndrome, significantly more often than did VD pa-
tients. As opposed to this, VD patients had a conversion neurosis significantly more often. This is a disturbance at a higher structural level and is determined in a later phase of life than the borderline syndrome. In terms of treatment, this has consequences as far as psychotherapeutic intervention is concerned. The earlier neurosis requires longer treatment and, on the whole, has a less favorable prognosis.

Depression correlates with CPPS. In the case of dysesthetic vulvodynia, antidepressives are used, not, however, because of the clinically determined depression but because of the neuralgiform pain and the fact that it responds well to tricyclic antidepressants.

In our study, only the group treated as inpatients were significantly more depressive than the control group. Those with less chronic symptoms, who were treated only as outpatients, were not more depressive. In the case of the group treated as inpatients, there had been an intense chronic course and multiple treatments. These patients were admitted for psychosomatically oriented treatment as a last resort. The results of psychological tests confirmed the diagnoses made on the basis of the neurosis model: neurotic depression is an earlier disturbance and, as mentioned above, occurs significantly more often in the case of CPPS. Typical, as far as early disturbances are concerned, is the fact that there was a broken-home situation in the case of a significantly higher number of CPPS patients, with separation of the parents, alcoholism and sexual abuse, than in the case of the VD patients.

The VD outpatients were not depressive, while the vulvodynia and CPPS in patients were significantly more depressive than CG. Therefore, it appears that depression is not specific to vulvodynia but rather the result of the intense symptoms.

CPPS is a different psychosomatic entity than CVP and is accompanied by serious psychological disturbances, which, in the case of CPPS patients, have developed possibly as a result of earlier traumatization. At the same time, a multifactorial relationship, which influences how the disorder is subjectively experienced, even when a somatic disorder exists, is conceivable as far as the etiology of chronic symptoms is concerned. Chronic VD also has psychological implications, making a psychosomatically oriented form of treatment, which includes the development of coping mechanisms, recommended. The psychological effects of vulvodynia are considerable and, due to the symptoms, also affect human relations—in particular, interaction with the partner. Contrary to CPPS patients, VD patients appear to have psychological problems as a result of the symptoms; however, their personality structure is less seriously disturbed. According to our results and the impression during the interviews, the reasons for depression and psychological alterations are the chronic nature of the disease, the “egg” of the chicken and the egg, in contrast to patients with CPPS, in whom the basis of the disease was found in earlier life, the “chicken.” Psychosomatically oriented treatment should encompass talks with the patients as well as with the partner. To talk about the subjective experience of the disease may have a positive benefit. The aim should also be to develop coping mechanisms. However, we are not able to give direct evidence of the chicken-and-egg relation, the difference between cause and effect. Psychosomatic therapy is not able to give a unidirectional response due to interdependencies of various factors.

These two clinical groups were studied for the first time on the basis of sociodemographic data, psychological tests and structural-level diagnoses. Our results show that the disorders are two different psychosomatic entities.

References

11. Lynch PJ: Vulvodynia: A syndrome of unexplained vulvar