Dyspareunia Resulting From Vulvar Vestibulitis Syndrome: A Neglected Health Problem

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With a prevalence of approximately 10% for North American women, vulvar vestibulitis can have enormous quality of life implications for patients and their partners. When gynecologists and other medical specialists have difficulty finding an organic cause for the chronic pain associated with this disorder, patients find themselves referred to the mental health care professional, who must determine the diagnosis and course of treatment.

Vulvar vestibulitis syndrome (VVS) is thought to be the major cause of dyspareunia in pre-menopausal women. Current epidemiological estimates suggest a lifetime prevalence of approximately 10% for North American women (Harlow et al., 2001). Vulvar vestibulitis syndrome sufferers are often referred to mental health care professionals by gynecologists and other medical specialists who can find no organic basis for the pain and imply to the women that it is all in their heads. Mental health care professionals may make a variety of diagnoses and assumptions about the nature of the pain, ranging from poor sexual technique to somatization and then treat the women accordingly. These diagnoses and treatments rarely help, and women find themselves increasingly frustrated by an endless series of referrals and little pain relief. Moreover, there is much clinical evidence to suggest that the dyspareunia resulting from VVS has major deleterious effects on the quality of life and intimate relationships of young women (Binik et al., 2000).

Case History

"Julie" was a 25-year-old, unmarried law student who came to see me after finding my name on the Internet. She reported having consulted numerous medical professionals and several alternative medical specialists without any relief for her recurrent dyspareunia. Her psychosocial and sexual development were unremarkable, and she appeared to have experienced a relatively normative series of sexual experiences and relationships until age 23. Although she reported occasionally experiencing some pain or discomfort during intercourse, this did not recur and typically disappeared quickly if she changed position or became more aroused. At the age of 23, while breaking up with a boyfriend, she reported experiencing a series of vaginal/yeast infections that she treated on her own with over-the-counter medications. She diagnosed these infections both because intercourse became painful and she noticed some vaginal discharge.

Julie did not have intercourse again for several months. In the interim, she noticed that tampon insertion was much more uncomfortable than usual but still possible. The next time she had intercourse, Julie experienced a severe burning and cutting pain during penetration, although she was highly aroused. Despite this pain, she continued intercourse and experienced burning during urination for the next 36 hours. From this time on, Julie reported severe pain during attempted penetration on 100% of subsequent intercourse attempts. This pain often continued for a few hours after intercourse and was exacerbated by urination. Pain did not occur unless there was pressure to the vulvar area, e.g., intercourse, gynecological examination, tampon insertion, bicycle riding, tight jeans. Julie began to anticipate the pain and reported avoiding sexual and relationship opportunities; she also reported a marked decline in sexual desire. According to her family physician's report, Julie was in excellent health and was taking no medications. She also provided me with an extensive set of test results and physician reports indicating that she was free of infection, human papilloma virus (HPV), vulvovaginal abnormality or disease, or any chronic illness.

Classification/Assessment

Although it is not mentioned in the DSM-IV, VVS was clearly described in the 19th century as "hyperesthesia of the vulva" (Skene, 1898). Why this syndrome appears to have been forgotten until recently is not clear but is probably the result of the fact that VVS and dyspareunia, in general, did not easily fit into the prevailing conceptual diagnostic models in either gynecology or psychiatry. In gynecology, the traditional diagnostic strategy for chronic dyspareunia has been to look for organic causes and in their absence assume a psychogenic etiology. Unfortunately, there are no reliable organically based diagnostic markers of VVS. Moreover, the routine gynecological examination does not carefully examine the vulvar vestibule where the pain of VVS is hypothesized to be localized. It is interesting that psychiatric nosologies are similar to gynecological ones and also define dyspareunia in terms of the organic/psychogenic dichotomy. Strangely, these nosologies ignore the
location of the pain. As a result, dyspareunia without organic cause is defined by the activity with which it interferes, i.e., sexual intercourse. Formally classifying a pain condition by the activity with which it interferes is an unusual nosological strategy since it results in the following diagnostic anomaly: both a deep pain felt close to the right ovary during thrusting and a superficial pain felt in the vulvovaginal area during penetration are classified under the same category of “sexual pain” (dyspareunia not due to a general medical condition, 302.76). What determines the sexual nature of this pain or why it is a sexual dysfunction altogether is not clear, since the pain can be easily induced in non-sexual situations.

Friedrich (1987), a gynecologist, helped to systematize the diagnosis of VVS by suggesting three criteria that have become the accepted gynecological standard: 1) severe pain on vestibular touch or attempted vaginal entry; 2) tenderness to pressure localized within the vulvar vestibule; and 3) physical findings confined to vestibular erythema of various degrees. The diagnosis is typically based on the woman's report of pain during penile penetration and confirmed by cotton swab palpation of the vulvar vestibule. Approximately 90% of women ultimately diagnosed with VVS describe their pain with adjectives like "burning" or "cutting" (Bergeron et al., 2001a). They also typically describe their pain as starting from the moment of penile penetration. This pain can be reproduced by a gynecologist lightly palpating the vulvar vestibule with a cotton swab. Such palpation is typically experienced as light pressure by the average woman but is exquisitely painful for women suffering from VVS. Cotton swab palpation of areas outside the vulvar vestibule result in minimal pain. So far, visual or colposcopic inspections of the vulva have not proved to be useful or reliable diagnostic methods for VVS.

Although these data suggest that VVS may be a distinctly diagnosable syndrome, there are still quite a number of unresolved practical and theoretical issues related to assessment. For example, there are numerous urogenital infections and dermatological conditions with symptoms that overlap with those of VVS (Foster, 2002; Stewart, 2002; Wesselmann et al., 1997). There are also accumulating data to indicate that VVS is sometimes hard to differentiate from vaginismus (de Kruiff et al., 2000; E.D. Reissing, M.D., et al., unpublished data, 2003). Finally, there are a number of chronic vulvar or urogenital pain syndromes referred to as essential or dysesthetic vulvodynia whose sufferers will also experience pain during intercourse and a positive cotton swab test. Usually, these vulvodynia sufferers can easily be differentiated from women with VVS by the fact that their pain is not limited to external stimulation but occurs spontaneously for long periods of time and often on a daily basis. It will often take careful and repeated multidisciplinary assessment to reliably determine whether a woman is suffering from VVS. Although women with VVS are often anxious, depressed or angry about their pain, this distress rarely reaches clinical levels (Meana et al., 1997). Currently available evidence suggests that these emotions are normal reactions to an upsetting and recurring pain experience that seriously threatens the quality and existence of intimate relationships. This distress must often be acknowledged and dealt with before problem-focused attempts at dealing with the pain are initiated. A careful assessment may require a detailed interview (regarding pain, sexual functioning, interpersonal relationships, coping attempts), a gynecological examination including the cotton swab test, exclusion of other possible problems and an assessment of the pelvic floor musculature. Etiology

There is a very long list of proposed etiologies for VVS. Unfortunately, this long list is not paralleled by an equally long list of controlled etiological studies. Most of the etiological studies are biological in emphasis; however, neither the biological nor the few psychosocial studies approach etiological issues from a multidisciplinary biopsychosocial perspective. As a result, our knowledge in this area is limited (Bergeron et al., 1997; Binik et al., 1999).

Among the biological factors that have been proposed or tested are the following: a history of repeated yeast infections or their associated treatments, early contraceptive use, HPV infection, early vulvar trauma, lowered immune functioning, allergic reactions, increased vestibular inflammation/blood flow, genetic factors, and calcium oxylate. Currently, there are several promising findings:

1. VVS appears to be associated with the early use of oral contraceptives (Bouchard et al., 2002);

2. There may be local vestibular changes reflecting increased inflammation or increased neural innervation (Bohm-Starke et al., 2001a);

3. There is evidence for a possible genetic predisposition to VVS linked to the interleukin-1
Hypertonicity of the pelvic floor musculature is associated with urogenital pain (Glazer et al., 1995).

The following are among the psychosocial factors that have been proposed or investigated: increased levels of psychopathology; heightened marital distress; a history of sexual abuse; and increased levels of various personality traits/cognitive styles such as catastrophizing, hypervigilance, erotophobia, neuroticism and shyness. The only consistent finding to date is increased trait anxiety (Granot et al., 2002; Payne et al., 2002; Van Lankveld et al., 1996).

In addition, there are now several studies suggesting that pain thresholds in women with VVS are lower than those in matched controls (Bohm-Starke et al., 2001b; Granot et al., 2002; Pukall et al., 2002). One intriguing study pointed out that these altered thresholds are not limited to pain but include lowered touch perception in vulvar and non-vulvar areas (Pukall et al., 2002). These findings, as well as epidemiological data suggesting that women with VVS experience a higher incidence of other chronic pain syndromes, suggest that it may not be accurate to define VVS as a highly localized problem with a specific vulvar etiology (Danielsson et al., 2000). Since all the current etiological studies are cross-sectional, it is not clear whether the consistent or promising findings with the possible exception of the genetic ones are cause or effect. Diagnostic and sampling differences also limit the generalizability of most of the findings. To date there is of little use for the clinician in these studies except to avoid making premature assumptions about appropriate intervention targets based on inadequate etiological information.

**Treatment**

The American College of Obstetricians and Gynecologists (ACOG) (1997) has outlined a hierarchical treatment strategy for VVS (Figure). This treatment algorithm appears to follow a traditional medical strategy of starting with conservative treatments and gradually progressing to more invasive interventions. It is interesting that there is no controlled evidence to support any of the first four levels of intervention. In fact, there have been three randomized, controlled trials investigating medical interventions including cromolyn cream (Nyiříjesy et al., 2001), fluconazole (Diflucan) (Bornstein et al., 2000) and topical estrogen (S. Bazin, M.D., unpublished data, 1995), which have been demonstrated to be no better than placebo. There are probably other numerous unpublished medical trials that have failed to document treatment efficacy for VVS. Currently, there are several trials underway funded by the National Institutes of Health examining other interventions such as topical lidocaine, antidepressant medication and low oxalate diet.

There are, in fact, two randomized, controlled trials that documented the efficacy of nonmedical approaches such as cognitive-behavioral therapy, pelvic floor biofeedback/physiotherapy and vestibulotomy (Bergeron et al., 2001b; Weijmar Schultz et al., 1996). These studies appear to have had little effect on ongoing North American practice, although the data are striking. Basically, all three types of intervention result in clinically significant pain reduction effects ranging from approximately 40% for cognitive-behavioral therapy, biofeedback and physiotherapy to 70% for vestibulotomy. Why vestibulotomy is so successful is not well-understood. Despite these excellent pain reduction outcome results, Bergeron et al. (2001b) pointed out that pain reduction is not equivalent to a return of sexual function. When sexual frequency or satisfaction, as opposed to pain reduction, is used as the major dependent variable, there is no difference in outcome between these treatments. This suggests that while pain reduction may be necessary for successful outcome, it is not sufficient for a return of sexual functioning; this may require additional intervention particularly to facilitate the return of sexual desire.

**Case Follow-Up**

Julie was simultaneously referred for pelvic floor physical therapy and cognitive-behavioral group therapy. The pelvic floor physical therapy is consistent with the management of many chronic pain syndromes where local changes in muscle tone are hypothesized to contribute to the pain experience (Mense et al., 2001). It is also consistent with our observation that women who experience recurring pain during penetration come to expect such pain and quite naturally "tense up" in the pelvic area. The pelvic floor physical therapy usually takes approximately six sessions and involves manual techniques, biofeedback and homework exercises that are designed to stretch and relieve muscle tension, increase muscle strength and voluntary control, and desensitize fears to vulvovaginal touch and penetration.

The cognitive-behavioral group therapy typically lasts 10 to 12 sessions and focuses on psychoeducational interventions relating to pain and sexuality; pain management coping strategies (e.g., relaxation); cognitive interventions (e.g., reframing) to prevent catastrophizing; sex therapy...
exercises to promote pleasure and desire (e.g., resuming or initiating nonpenetrative sexual activities); and group support to provide emotional reassurance.

At the end of these therapies, Julie reported that her pain was much reduced and that she was able to experience somewhat pleasurable intercourse with her partner. Her sexual desire, however, had still not returned to close to previous levels. I discussed with her the possibility of pursuing more sex therapy to restore her desire or considering a vestibulectomy to further reduce her pain, but she declined both options, indicating that she was currently happy with the outcome. At one-year follow-up Julie reported that the situation had remained stable and that she still experienced some pain during penetration and intercourse but “had learned to live with it.” She had recently become engaged and reported that she and her fiancé enjoyed many nonpenetrative sexual activities. She declined the suggestion of further interventions, indicating that she was too busy with school and wedding preparations. Summary

Dyspareunia resulting from VVS is a highly frequent and commonly misdiagnosed problem. It is not clear that the previously mentioned categorical classification systems capture the complex interplay of genital pain, interference with sexuality and relationships, fear of penetration, pelvic muscular tension, and emotional distress. Failure to assess and treat this problem adequately has enormous quality of life implications for women and their partners. It may be better to conceptualize the problem as a chronic pain disorder rather than as a sexual dysfunction (i.e., the pain is not sexual, the sex is painful) since this focuses clinical and research attention on the central symptom--pain.

References:

19. Nyirjesy P, Sobel JD, Weitz MV et al. (2001), Cromolyn cream for recalcitrant idiopathic vulvar


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