Vulvodynia
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Abstract

Vulvodynia or vulvar pain syndrome is a chronic, heterogeneous, and multifactorial disease with a high prevalence. This condition affects Caucasians, African Americans, Africans and Hispanic women, particularly those sexually active at child-bearing age. The etiology of this condition is complex and remains elusive. An accurate diagnosis requires a comprehensive history, physical examination and targeted diagnostic tests. Although many treatment options have been utilized, a rational therapeutic strategy is still under research. Psychological counseling and group support should be considered in all cases.

Vulvodynia or vulvar pain syndrome is a chronic, heterogeneous, and multifactorial disease with a high prevalence. As many as 15 percent of the women seen at the practitioners' office report pain on palpating areas of the vulvar vestibule [1, 2]. The condition may affect up to 18 percent of the female population. This disease affects Caucasians, African Americans, Africans and Hispanics women, particularly those sexually active at child bearing age.

The etiology of this multifactorial condition, frequently accompanied by a plethora of physical disabilities with consequent psychological distress and sexual dysfunction, is complex and remains elusive. Gross examination of the vulvar epithelium may show erythema but histological evaluation does confirm infection, neoplasm or neurological disorder. Rather, it is a nonspecific inflammation with a higher density of nervous tissue and focal areas of angiogenesis [3, 4].

Vulvodynia is categorized as either generalized or localized [5]. Localized vulvodynia is pain confined to a specific area of the vulva. Generalized Vulvodynia is pain involving the entire vulva. In addition, pain can be provoked or unprovoked. Provocation can occur by ordinarily nonpainful stimuli such as touch or pressure. Patients describe vulvar paresthesias or dysesthesias that may last hours after the provocation (the most frequent abnormal sensations are burning, soreness, rawness, stinging and irritation) [6, 7]. The definitions of factors involved in pain evoking, pain quality, duration, and distribution are otherwise quite variable from patient to patient [7].

The most common symptoms expressed by the patients are as follows: discomfort with separation of the labia minora, dyspareunia at the vestibular opening, point tenderness localized to area surrounding the Skene gland orifices or the Bartholin gland openings within the vulvar vestibule. These heterogeneous symptomatic manifestations were the cause of recent terminology debates among researchers and clinicians. The current and most widely accepted classification of vulvar pain as
devised by the International Society for the Study of Vulvar Disease recognizes vulvar pain related to a specific disorder (infectious, inflammatory, neoplastic or neurologic) and vulvodynia (pain due to nonspecific etiology) [5, 7].

Methods

Figure 1
Figure 1. Redness at the Bartholin gland openings

An accurate diagnosis is based on an exhaustive history, a detailed physical examination and skillfully selected diagnostic tests. Ruling out infections or dermatological abnormalities is also paramount. A comprehensive assessment of environmental factors, topical vulvovaginal irritants and disease triggers is necessary. Psychosocial contributing factors including intimate clothing and hygiene, stressors, sexual experiences and current sexual life should be carefully assessed [8]. Recently Arnold, et al., reported the results of a survey that highlights the psychological distress associated with vulvodynia and underscores the need for studies to investigate the relationship between chronic bladder and vaginal infections as etiologies of this condition as well as the association with comorbid conditions, such as fibromyalgia and irritable bowel syndrome [9]. Vulvovaginal infections caused by bacteria, fungi and/or virus should be initially excluded by appropriate cultures [10]. Careful examination of the vulva may reveal redness at the vestibule or the Bartholin gland openings. A moist swab is usually utilized to elicit point tenderness or sharp pain in the anterior vestibule, at the meatus of the Skene or Bartholin glands, in the posterior vestibule, and to confirm the diagnosis [11]. If dermatoses or suspicious areas of neoplasia area suspected a biopsy may be indicated. Colposcopy may be helpful, especially if there is no gross epithelial abnormality. Extended treatment of deep Candida infection identified on colposcopically directed biopsy has been shown to improve vulvodynia [12].

Management

Although many treatment options have been utilized, a rationale therapeutic strategy is still under research. It will be prudent therefore to start from the simplest and less invasive therapy and proceed gradually to more aggressive one.

The most common intuitive medical approach recommends the discontinuation of all irritants (including soaps, perfumes and deodorants), diet modification (low oxalates intake, simple carbohydrates reduction and supplementation of calcium citrate), and use of cotton underwear, in addition to trial of relaxation techniques. Psychological counseling and group support should be added to all cases [13].

Topical treatments include local gel anesthetics (such as lidocaine 2%) applied over the tender areas 5-10 minutes before sexual intercourse and estrogen cream (0.5 to 2 g) every other day intravaginally specially for perimenopausal women. Regional therapies are pudendal nerve block (usually with bupivacaine 0.5%), and pelvic floor muscle rehabilitation with or without biofeedback [14].

Physical therapy has been shown to be efficacious in the treatment of vulvodynia [15]. It involves the assessment of the patient history and pelvic musculature, joints,
and tension. The function of related structures such as bowel and bladder is assessed as well. Help is given for dietary modification and to reduce contact irritants. Most therapists employ a weekly 60-minute session focused on exercise for the pelvic girdle and floor, soft tissue mobilization, joint manipulation. However, standardization regarding the effective treatment approach does not exist between therapists and therefore outcomes can not be validated nor reproduced [16]. The American Physical Therapy Association's Section on Women's Health initiated the Vulvar Pain Task Force in February 2003 to research and develops evidenced-based physical therapy guidelines for vulvodynia.

Because histologic features of the vulvar epithelium can show an increased density of neural tissue and nonspecific inflammation, neuromodulators have been used. Oral medications include tricyclic antidepressants (like amitriptiline, 25 to 50 mg at bed time, or nortriptiline, 10 to 25 mg at bed time) and anticonvulsants (like gabapentin 300 to 900 mg). The above medications should be initiated at the lowest doses and increased over 2-4 weeks period. Opiates should be utilized only for short periods in acute settings [7].

Surgical excision of the vulvar tissue involved should be considered in recalcitrant cases [17]. Success from vestibulectomy varies between 65 and 90 percent but long term relief is uncertain [17, 18, 19]. Generally, the vestibular epithelium is removed from the hymenial ring to the posterior fourchette. This can be done unilaterally or bilaterally based on patient's pain distribution.

Laser ablation of the vulvar epithelium is an alternative to the potentially morbid vestibulectomy. Laser ablation of the vulva for vulvodynia has been described particularly with the KTP-Nd: YAG laser but also the CO2 laser. Because angiogenesis and increased nerve density are characteristics of vulvodynia, the laser is used to disrupt this histologic abnormality and to promote collagen remodeling without changing the gross anatomy. The KTP-Nd: YAG laser and pulsed-dye laser offer the advantage of being absorbed more readily by vasculature and thus promoting collagen remodeling. Results of laser therapy for vulvodynia compare similarly to vestibulectomy. Complete response occurs in 62 percent vs. improvement in 92 percent [20]. Recent research was reported on KTP: Nd: YAG laser treatment for vulvodynia examining patient response after 2 years. It was found that 68 percent reported less pain with sexual intercourse and 29 percent reported no change [21].

References


