Persistent Vulvar Pain

ABSTRACT: Persistent vulvar pain is a complex disorder that frequently is frustrating to the patient and the clinician. It can be difficult to treat and rapid resolution is unusual, even with appropriate therapy. Vulvar pain can be caused by a specific disorder or it can be idiopathic. Idiopathic vulvar pain is classified as vulvodynia. Although optimal treatment remains unclear, consider an individualized, multidisciplinary approach to address all physical and emotional aspects possibly attributable to vulvodynia. Specialists who may need to be involved include sexual counselors, clinical psychologists, physical therapists, and pain specialists. Patients may perceive this approach to mean the practitioner does not believe their pain is “real”; thus, it is important to begin any treatment approach with a detailed discussion, including an explanation of the diagnosis and determination of realistic treatment goals. Future research should aim at evaluating a multimodal approach in the treatment of vulvodynia, along with more research on the etiologies of vulvodynia.

Recommendations and Conclusions
The American College of Obstetricians and Gynecologists and the American Society for Colposcopy and Cervical Pathology provide these recommendations and conclusions:

- Vulvar pain can be caused by a specific disorder or it can be idiopathic. Idiopathic vulvar pain is classified as vulvodynia.
- The classification of vulvodynia is based on the site of the pain; whether it is generalized, localized, or mixed; whether it is provoked, spontaneous, or mixed; whether the onset is primary or secondary; and the temporal pattern (whether the pain is intermittent, persistent, constant, immediate, or delayed).
- A thorough history should identify the patient’s duration of pain, medical and surgical history, sexual history, allergies, and previous treatments.
- Cotton swab testing is used to identify the areas of pain (classifying each area of pain as mild, moderate, or severe) and to differentiate between generalized and localized pain.
- The vulva and vagina should be examined, and infection ruled out when indicated using tests, including wet mount, vaginal pH, fungal culture, and Gram stain, or other available point-of-care testing or polymerase chain reaction testing.
- A musculoskeletal evaluation would help rule out musculoskeletal factors associated with vulvodynia, such as pelvic muscle overactivity and myofascial or other biomechanical disorders.
- Medications used to treat vulvar pain include topical, oral, and intralesional medicinal substances, as well as pudendal nerve blocks and botulinum toxin. Tricyclic antidepressants and anticonvulsants also can be used for vulvodynia pain control.
- Choosing the proper vehicle for topical medications is important because creams contain more preservatives and stabilizers than ointments and often produce burning on application, whereas ointments are usually better tolerated.
- Women with vulvodynia should be assessed for pelvic floor dysfunction. Biofeedback and physical therapy, including pelvic floor physical therapy, can be used to treat localized and generalized vulvar pain.
- An emerging treatment for vulvodynia is transcutaneous electrical nerve stimulation.
• When other nonsurgical management options have been tried and failed, and the pain is localized to the vestibule, vestibulectomy may be an effective treatment.
• Although optimal treatment remains unclear, consider an individualized, multidisciplinary approach to address all physical and emotional aspects possibly attributable to vulvodynia.
• It is important to begin any treatment approach with a detailed discussion, including an explanation of the diagnosis and determination of realistic treatment goals.

Introduction
Persistent vulvar pain is a complex disorder that can be difficult to treat. This Committee Opinion provides an introduction to the diagnosis and management of persistent vulvar pain for obstetrician–gynecologists and other gynecologic care providers. It is adapted, with permission, from the 2013 Vulvodynia Guideline Update (1). It also includes reference to a new consensus terminology and classification of persistent vulvar pain, endorsed by multiple professional organizations during a 2015 consensus conference (2).

Terminology and Classification
Many women experience vulvar pain and discomfort that affect the quality of their lives. Vulvar pain can be caused by a specific disorder or it can be idiopathic. Idiopathic vulvar pain is classified as vulvodynia. The International Society for the Study of Vulvovaginal Disease described vulvodynia as vulvar discomfort, most often reported as burning pain, which occurs in the absence of relevant visible findings or a specific, clinically identifiable, neurologic disorder (3). Vulvodynia is not caused by a commonly identified infection (eg, candidiasis, human papillomavirus, herpes), inflammation (eg, lichen sclerosus, lichen planus, immunobullous disorder), neoplasia (eg, Paget disease, squamous cell carcinoma), or a neurologic disorder (eg, herpes neuralgia, spinal nerve compression). The newer consensus terminology notes that vulvar pain can be classified as vulvar pain caused by a specific disorder or vulvodynia. Vulvodynia is defined as vulvar pain of at least 3 months’ duration without identifiable cause, which may have potential associated factors (2) (Box 1). The classification of vulvodynia is based on the site of the pain; whether it is generalized, localized, or mixed; whether it is provoked, spontaneous, or mixed; whether the onset is primary or secondary; and the temporal pattern (whether the pain is intermittent, persistent, constant, immediate, or delayed). The terms vulvar dysesthesia and vulvar vestibulitis are no longer used to describe vulvar pain. There is now consensus to use the term vulvodynia and subcategorize it as localized, generalized, or mixed. Box 1 classifies persistent vulvar pain. Proposed etiologies include abnormalities that stem from early fetal development, genetic or immune factors, hormonal factors, inflammation, infection, neuropathic changes, and dietary oxalates (4). However, given the variable presentation and individualized responses to treatment, causation is very likely multifactorial.

Although distinguishing generalized vulvodynia from localized vulvodynia is fairly straightforward (using a simple cotton swab test) (Fig. 1), it has not been determined whether or not generalized and localized vulvodynia represent different manifestations of the same disease process.

Diagnosis and Evaluation
Vulvodynia is a diagnosis of exclusion. Thus, excluding other treatable causes before assigning this diagnosis is imperative. A thorough history should identify the

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**Box 1. 2015 Consensus Terminology and Classification of Persistent Vulvar Pain**

**A. Vulvar pain caused by a specific disorder**

- Infectious (eg, recurrent candidiasis, herpes)
- Inflammatory (eg, lichen sclerosus, lichen planus, immunobullous disorders)
- Neoplastic (eg, Paget disease, squamous cell carcinoma)
- Neurologic (eg, postherpetic neuralgia, nerve compression or injury, neuroma)
- Trauma (eg, female genital cutting, obstetric)
- Iatrogenic (eg, postoperative, chemotherapy, radiation)
- Hormonal deficiencies (eg, genitourinary syndrome of menopause [vulvovaginal atrophy], lactational amenorrhea)

**B. Vulvodynia**—Vulvar pain of at least 3 months’ duration, without clear identifiable cause, which may have potential associated factors

The following are the descriptors:

- Localized (eg, vestibulodynia, clitorodynia), generalized, or mixed (localized and generalized)
- Provoked (eg, insertion, contact), spontaneous, or mixed (provoked and spontaneous)
- Onset (primary or secondary)
- Temporal pattern (intermittent, persistent, constant, immediate, delayed)

*Women may have a specific disorder (eg, lichen sclerosus) and vulvodynia

specific diseases that can cause vulvar pain. Fungal culture may identify resistant strains, but sensitivity testing usually is not required. Testing for human papillomavirus infection is unnecessary. The role of biopsy remains at the discretion of the obstetrician–gynecologist or other gynecologic care provider; a retrospective review showed that clinically relevant dermatoses (based on dermatopathologist-analyzed vulvar biopsies) were noted among 61% (55 of 90 biopsy specimens) of patients with refractory vulvodynia (6). Thus, although there are no specific histopathologic features of vulvodynia, clinicians should assess the need for biopsy to exclude other etiologies. Vulvar pain also may be referred pain from other parts of the body, such as the back or hips, so a thorough musculoskeletal evaluation should be considered (4) (see Fig. 3, Fig. 4, Fig. 5). A musculoskeletal evaluation would help rule out musculoskeletal factors associated with vulvodynia, such as pelvic muscle overactivity and myofascial or other biomechanical disorders.

**Figure 1.** Cotton swab testing. Cotton swab testing starts on the thighs, followed by the labia majora and interlabial sulci. The vestibule is tested at the 2-, 4-, 6-, 8-, and 10-o’clock positions. When pain is present, the patient is asked to quantify it as mild, moderate, or severe. (Reprinted from Haefner HK. Critique of new gynecologic surgical procedures: surgery for vulvar vestibulitis. Clin Obstet Gynecol 2000;43:689–700.)

<table>
<thead>
<tr>
<th>Mons pubis</th>
<th>Clitoral hood</th>
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<tr>
<td>Clitoris</td>
<td>Outer labia</td>
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<td>Labia majora</td>
<td>Labia minora</td>
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<td>Vulvar vestibule</td>
<td>Urethra</td>
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<td>Hart line</td>
<td>Vaginal opening</td>
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<td>Hymen</td>
<td>Vestibular glands</td>
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<td>Perineum</td>
<td>Anus</td>
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**Figure 2.** Vulva anatomy. The vulva consists of the organs immediately external to the vagina: mons pubis; clitoris; labia majora; labia minora; vulvar vestibule; urethral meatus; hymen; Bartholin and Skene glands and ducts; and vaginal introitus. (Image courtesy of Dawn Danby and Paul Waggoner, co/ the International Society for the Study of Vulvovaginal Disease. Reprinted from International Society for the Study of Vulvovaginal Disease. The normal vulva. Waxhaw [NC]: ISSVD; 2013. Available at: http://3b64we1rtwev2ibv6q12s4dd.wpengine.netdna-cdn.com/wp-content/uploads/2016/04/NormalVulva2013-final.pdf. Retrieved April 27, 2016.)

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feedback training; physical therapy, especially pelvic floor physical therapy; dietary modifications; cognitive behavioral therapy; sexual counseling; and surgery. Newer treatments include the use of stimulators and botulinum toxin (1). Gentle care of the vulva is advised. See Box 2 for vulvar care measures that can minimize vulvar irritation.

Medications used to treat vulvar pain include topical, oral, and intralesional medicinal substances, as well as pudendal nerve blocks and botulinum toxin. Many of these medications are known to interact with other drugs, and patients with vulvodynia may be taking multiple medications. Clinicians should check for any potential drug interactions before prescribing a new medication. Clinicians should consider stopping use of all topical medications before prescribing a new course of therapy as they may be contributing to burning pain symptoms. Commonly prescribed topical medications include a variety of local anesthetics (which can be applied immediately before intercourse or in extended use), estrogen cream, and tricyclic antidepressants compounded into topical form. Although topical steroids generally do not help patients with vulvodynia, trigger-point injections of a combination of steroid and bupivacaine have been successful for some patients with localized vulvodynia (7). Although nightly application of lidocaine 5% reduced dyspareunia in a prospective cohort, in a randomized, placebo-controlled trial, lidocaine 5% cream was found to be less effective than topical placebo (20% versus 33% response rate, respectively) (8, 9).

Figure 3. Palpation of the pubovaginalis portion of the levator ani. This assessment technique also can be applied as treatment, with the test position held for 30 seconds. (Reprinted from Prendergast SA, Weiss JM. Screening for musculoskeletal causes of pelvic pain. Clin Obstet Gynecol 2003;46:773–82.)


Treatment

As noted in earlier publications, most evidence for treating vulvodynia is based on clinical experience, descriptive and observational studies, or reports of expert committees. Few randomized trials of vulvodynia treatment exist. The reader is referred to the 2013 Vulvodynia Guideline Update for more details (1). Multiple treatments were previously reported (see Fig. 6), including vulvar care measures; topical, oral, and injectable medications; bio-

Figure 3. Palpation of the pubovaginalis portion of the levator ani. This assessment technique also can be applied as treatment, with the test position held for 30 seconds. (Reprinted from Prendergast SA, Weiss JM. Screening for musculoskeletal causes of pelvic pain. Clin Obstet Gynecol 2003;46:773–82.)

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Tricyclic antidepressants and anticonvulsants also can be used for vulvodynia pain control. When first prescribing these medications, clinicians should avoid polypharmacy. One drug should be prescribed at a time. Before prescribing antidepressants or anticonvulsants for a patient of reproductive age, the clinician should emphasize the need for contraception. Tricyclic antidepressants and anticonvulsants take up to 3 weeks to achieve

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Physical examination
Cutaneous or mucosal surface disease present

- Yes
  - Treat abnormal visible condition present (infections, dermatoses, premalignant, or malignant conditions)

- No
  - Cotton swab test
    - Not tender. No area of vulva touched described as area of burning
      - Alternative diagnosis (incorrect belief that persistent vulvar pain is present)
    - Tender or patient describes area touched as area of burning
      - Yeast culture
        - Positive
          - Antifungal therapy
            - Adequate relief
              - No additional treatment. Stop treatment when indicated
        - Negative
          - Inadequate relief
            - Good relief
              - Inadequate pain relief and pain localized to vestibule
                - Surgery (vestibulectomy)
            - Inadequate relief and pain generalized
              - Consider increasing dose of medications, combining medications for neuropathic pain, or both

Yeast culture

- Positive
  - Antifungal therapy
    - Adequate relief
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Cotton swab test

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  - Alternative diagnosis (incorrect belief that persistent vulvar pain is present)
- Tender or patient describes area touched as area of burning
  - Yeast culture

found to be no more effective than placebo include cromolyn 4% and nifedipine (10). Note that a compounding pharmacy may be needed to formulate topical medications. Choosing the proper vehicle for topical medications is important because creams contain more preservatives and stabilizers than ointments and often produce burning on application, whereas ointments are usually better tolerated (4).
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in dietary revisions; therapeutic ultrasonography; and biofeedback; bladder and bowel retraining; instruction; therapeutic exercises; active pelvic floor retraining; urogenital, and joint manipulation; electrical stimulation and myofascial release; trigger-point pressure; visceral, (vaginal and rectal) and external soft-tissue mobilization regulation strategies for confronting and reducing pain.

Vaginismus. Biofeedback aids in developing self-techniques are particularly helpful if there is concomi-therapy, including pelvic floor physical therapy, can be used to treat localized and generalized vulvar pain. These techniques are particularly helpful if there is concomitant vaginismus. Biofeedback aids in developing self-regulation strategies for confronting and reducing pain. Physical therapy treatment techniques include internal (vaginal and rectal) and external soft-tissue mobilization and myofascial release; trigger-point pressure; visceral, urogenital, and joint manipulation; electrical stimulation; therapeutic exercises; active pelvic floor retraining; biofeedback; bladder and bowel retraining; instruction in dietary revisions; therapeutic ultrasonography; and adequate pain control. Patients usually develop tolerance to some of the adverse effects of these medications (particularly sedation, dry mouth, and dizziness). Amitriptyline is used as a first-line agent beginning at an oral dose of 5–25 mg nightly and increased by 10–25 mg each week, generally not to exceed a total of 150 mg daily (4). If cessation is necessary, tricyclic antidepressants should not be stopped suddenly; weaning the patient by 10–25 mg every few days is indicated. Gabapentin, used to manage neuropathic pain disorders, is the most studied and used anticonvulsant for vulvodynia (4). Dosage can be increased over time from 300 mg total daily to a maximum dose of 3,600 mg daily (1,200 mg by mouth three times a day), and may need adjustment to avoid adverse effects. It is unusual, however, to experience adverse effects that lead to discontinuation. In elderly patients with vulvodynia, it may exacerbate gait and balance problems.

Women with vulvodynia should be assessed for pelvic floor dysfunction (4). Biofeedback and physical therapy, including pelvic floor physical therapy, can be used to treat localized and generalized vulvar pain. These techniques are particularly helpful if there is concomitant vaginismus. Biofeedback aids in developing self-regulation strategies for confronting and reducing pain. Physical therapy treatment techniques include internal (vaginal and rectal) and external soft-tissue mobilization and myofascial release; trigger-point pressure; visceral, urogenital, and joint manipulation; electrical stimulation; therapeutic exercises; active pelvic floor retraining; biofeedback; bladder and bowel retraining; instruction in dietary revisions; therapeutic ultrasonography; and home vaginal dilation (4, 11). Although physical therapy has been shown to be effective in treating vulvodynia, the approach is individualized, and outcomes are difficult to validate or reproduce (12).

An emerging treatment for vulvodynia is transcutaneous electrical nerve stimulation. Transcutaneous electrical nerve stimulation has been effective in other chronic pain conditions. A randomized controlled trial of transcutaneous electrical nerve stimulation in 40 women with vestibulodynia demonstrated improved pain and sexual function in the transcutaneous electrical nerve stimulation group compared with the control group (13).

When other nonsurgical management options have been tried and failed, and the pain is localized to the vestibule, vestibuloplasty may be an effective treatment. It consists of an excision limited to the painful portion of the vestibule from the hymen to the Hart line (the lateral boundary of the vulvar vestibule), including all tender parts extending to the anterior vestibule, if indicated (14). This procedure should be done only after failure of other treatments. The lack of randomized studies and insufficient information on complication rates preclude recommendation for vestibuloplasty as the initial treatment for localized pain. The success rate for vestibuloplasty ranges between 60% and 90% compared with 40% and 80% for nonsurgical interventions. However, there is no consensus method for evaluation of outcomes between studies or a standardized definition of successful treatment (14). Patients should be evaluated for vaginismus and, if present, treated before a vestibuloplasty is considered or performed.

There may, however, be subsets of patients more likely to experience a benefit from vestibuloplasty surgery. Patients with secondary dyspareunia have greater odds of improvement compared with patients with primary dyspareunia; those with constant pain in addition to dyspareunia are less likely to achieve pain reduction after surgery (15). Vestibulectomy (a procedure that involves incising the distal perimeter of the vulvar vestibule, undermining the vestibule, and securing it back in place after removal of only the underlying submucosal minor vestibular glands) is reported to be ineffective (14). There may, however, be subsets of patients more likely to experience a benefit from vestibuloplasty surgery. Patients with secondary dyspareunia have greater odds of improvement than patients with primary dyspareunia; those with constant pain in addition to dyspareunia are less likely to achieve pain reduction after surgery (15).

**Conclusion**

Persistent vulvar pain is a complex disorder that frequently is frustrating to the patient and the clinician. It can be difficult to treat, and rapid resolution is unusual, even with appropriate therapy. Decreases in pain may take weeks to months and may not be complete. For generalized vulvar burning unresponsive to previous behavioral and medical treatments, referral to a pain specialist may be helpful.

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**Box 2. Vulvar Care Measures That Can Minimize Vulvar Irritation**

The following vulvar care measures can minimize vulvar irritation:

- Wear 100% cotton underwear (no underwear at night)
- Avoid vulvar irritants (perfumes, dyes, shampoos, detergents) and douching
- Use mild soaps for bathing, without applying it to the vulva
- Clean the vulva with water only
- Avoid the use of hair dryers on the vulvar area
- Pat the area dry after bathing, and applying a preservative-free emollient (such as vegetable oil or plain petrolatum) topically to hold moisture in the skin and improve the barrier function
- Switch to 100% cotton menstrual pads (if regular pads are irritating)
- Use adequate lubrication for intercourse
- Apply cool gel packs to the vulvar area
- Rinse and pat the vulva dry after urination

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Although optimal treatment remains unclear, consider an individualized, multidisciplinary approach to address all physical and emotional aspects possibly attributable to vulvodynia. Specialists who may need to be involved include sexual counselors, clinical psychologists, physical therapists, and pain specialists. Patients may perceive this approach to mean the practitioner does not believe their pain is “real”; thus, it is important to begin any treatment approach with a detailed discussion, including an explanation of the diagnosis and determination of realistic treatment goals. Future research should aim at evaluating a multimodal approach in the treatment of vulvodynia, along with more research on the etiologies of vulvodynia.

For More Information

The American College of Obstetricians and Gynecologists has identified additional resources on topics related to this document that may be helpful for ob-gyns, other health care providers, and patients. You may view these resources at www.acog.org/More-Info/PersistentVulvarPain.

These resources are for information only and are not meant to be comprehensive. Referral to these resources does not imply the American College of Obstetricians and Gynecologists’ endorsement of the organization, the organization’s web site, or the content of the resource. The resources may change without notice.

References