



10-MINUTE CONSULTATION

Vulvodynia (chronic vulval pain)

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What you need to know

- Vulvodynia is chronic vulval pain lasting more than three months without an identifiable cause, and is classified as primary (present from the first physical contact) or secondary (arising after an initial pain-free period)
- A variation of the cotton swab test can be used to localise and quantify pain
- Treatment includes pelvic floor physiotherapy, psychotherapy, and oral neuropathic pain medications

A 35 year old woman presents to her general practitioner saying penetrative sex with her partner is painful and that the pain has been progressively increasing in severity over the past year. She describes the pain as burning and located around the opening of the vagina.

Vulvodynia is chronic vulval pain lasting more than three months without an identifiable cause.^{1,2} It can be classified as primary—present from the first physical contact—or secondary, arising after an initial pain-free period.² The pain may be localised to a specific area, such as the vestibule or clitoris, or generalised, involving the entire vulva.² The exact mechanism of why vulvodynia occurs is not fully understood and is likely multifactorial.

Multiple, large population based surveys in the US estimate the lifetime prevalence of vulvodynia to be 10-28% in the general population.⁴ Qualitative studies show themes of delayed diagnosis (in many cases years), symptoms minimised by healthcare providers, and a lack of awareness and understanding by health professionals.^{3,4} For example, in interviews with 10 women aged 25 to 57 in the UK diagnosed with vulvodynia, participants reported experiencing disbelief, stigmatisation, and minimisation of their symptoms by physicians.⁴ Interviews of eight women aged 23 to 32 in Norway revealed similar patient experiences.³

Vulvodynia, like other vulval pain, often affects quality of life, causing extreme discomfort or pain while wearing underwear, trousers, or while sitting. It can also hinder intimate relationships, gynaecological examinations and procedures, and choice of menstrual products, and can negatively impact daily activities such as going to work, school, and recreational activities.

What you should cover

Take a focused history:

- Where is the pain located? For example, is it localised to a certain portion of the genitalia? Pain confined to the clitoris is clitorodinia, and to the vestibule or vaginal entrance is vestibulodynia.
- How long has the vulval pain been present? The minimum duration required for a diagnosis of vulvodynia is three months.¹
- Has there always been pain with sexual activity or with other physical contact (primary vulvodynia) or have symptoms developed after a period of pain free contact (secondary vulvodynia)? For secondary vulvodynia, ask about possible triggers, such as a traumatic injury and sexual assault.
- What does the pain feel like? Patients often describe the pain as burning, but it can also be sharp, pricking, or irritating.⁵
- Is the pain provoked? For example, by touch or insertion, unprovoked (appears spontaneously with no trigger), or mixed?⁶
- Are there situations or activities that exacerbate the pain, such as intercourse, wearing tight clothes, touching the affected area, riding a bicycle, using tampons, or prolonged sitting?^{6,7}
 - Pain that appears while riding a bicycle may suggest nerve compression.
 - Pain that arises or worsens with sitting down may suggest recent trauma (eg, obstetric perineal trauma, genital mutilation), infected or inflamed Bartholin's cyst or other vulval or vaginal cysts, neuropathic pain syndromes (eg, postherpetic neuralgia, pudendal neuralgia, neuroma), or iatrogenic pain (eg, postoperative scarring or nerve damage, chemotherapy, radiation).
 - Intermittent pain affected by position or situation may suggest pelvic floor dysfunction—a common and often underrecognised condition, which may occur as a result of previous sexual assault, endometriosis, or arise after any pain has occurred (eg, with sexual intercourse or a gynaecological examination).
- What does the pain feel like on a scale of 1-10? This can be useful in quantifying the pain and assessing response to treatment. Moreover, greater pain severity correlates with an elevated risk of additional comorbidities, however it does not help differentiate cause.⁸

This is part of a series of occasional articles on common problems in primary care.

- Do you have a history of cervical cancer or dysplasia? This is a risk for vulval dysplasia and should prompt you to assess for vulval lesions.¹⁷
- Have you had any recent genital infections such as chlamydia, yeast and bacterial vaginosis, or obstetrical lacerations or tears to the area affected? If the patient has had recent infection, rule out recurrence of infection.⁷
- Do you use any hormone-containing medications, including contraceptives, fertility medications, or endometriosis medications such as gonadotropin releasing hormone agonists? These may lead to vaginal atrophy and pain.^{9 10}
- Are there any associated symptoms beyond pain, which may suggest an alternative or comorbid diagnosis (table 1)?

Table 1 | Associated genital symptoms suggesting potential alternative or comorbid diagnosis^{12 6}

Associated symptom	Potential diagnosis
Itching and/or burning	- Infections—eg, candidiasis, bacterial vaginosis, and herpes - Vulvovaginal atrophy—genitourinary syndrome of menopause, breastfeeding, hormonal medications including contraceptives ¹¹ - Dermatological conditions—eg, lichen sclerosus, lichen planus, contact dermatitis, psoriasis - Malignancy—eg, squamous cell carcinoma and Paget disease
Discharge	- Infection (which may also cause itching or burning), including candidiasis - Contact dermatitis from discharge
Bleeding	- Obstetric trauma (eg, episiotomy, granulation tissue, perineal laceration and repair) - Malignancy
Lumps	- Bartholin's cyst or abscess, other vulval or vaginal cysts, or abscesses - Malignancy
Urinary symptoms—increased frequency, urgency, pain with voiding	- Urinary tract infection - Negative dipstick and urine culture may suggest pelvic floor muscle dysfunction, endometriosis, or interstitial cystitis (painful bladder syndrome)
Dryness, irritation	- Menopause (natural and surgical) and other low oestrogen states (for example, lactational amenorrhoea or hypothalamic amenorrhoea) leading to atrophy and pain. - Iatrogenic—eg, side effects of medical treatments, postoperative scarring, radiation

Examination

Before an intimate examination, explain the procedure to the patient using a trauma-informed approach. Ensure the patient feels safe and in control, for example by asking their permission prior to touching them.¹² We recommend adequate lighting, visualisation, draping, documentation of consent, and presence of a qualified chaperone.¹² There are no formal guidelines describing the optimal examination for the symptoms of vulval pain. Based on our experience, common accepted practice, and methodology in vulval pain studies,⁶ we suggest:

Assess

- If the clitoris is visible (fully, partially, or not visible)
- Whether labia minora are present, resorbed, or absent
- Whether there are inflammatory skin changes and, less often, severe atrophy.

Skin colour changes (dermatoses), texture changes (dermatoses, dysplasia), and focal masses, erosions, or ulcers, may suggest infection, dysplasia, or malignancy.

A variation of a cotton swab test can be used to localise and quantify the pain. This test also assesses whether the pain is localised or generalised, provoked, unprovoked, or mixed:

- Using a cotton swab, demonstrate, in a neutral area (eg, the inner thigh), that you will be pressing it gently on various points of the vulva
- Ask the patient to rate their pain on a scale of 0-10 with 0 being no pain and 10 being the worst possible pain and examine structures systematically (fig 1)⁶
- Document the location and severity of pain.

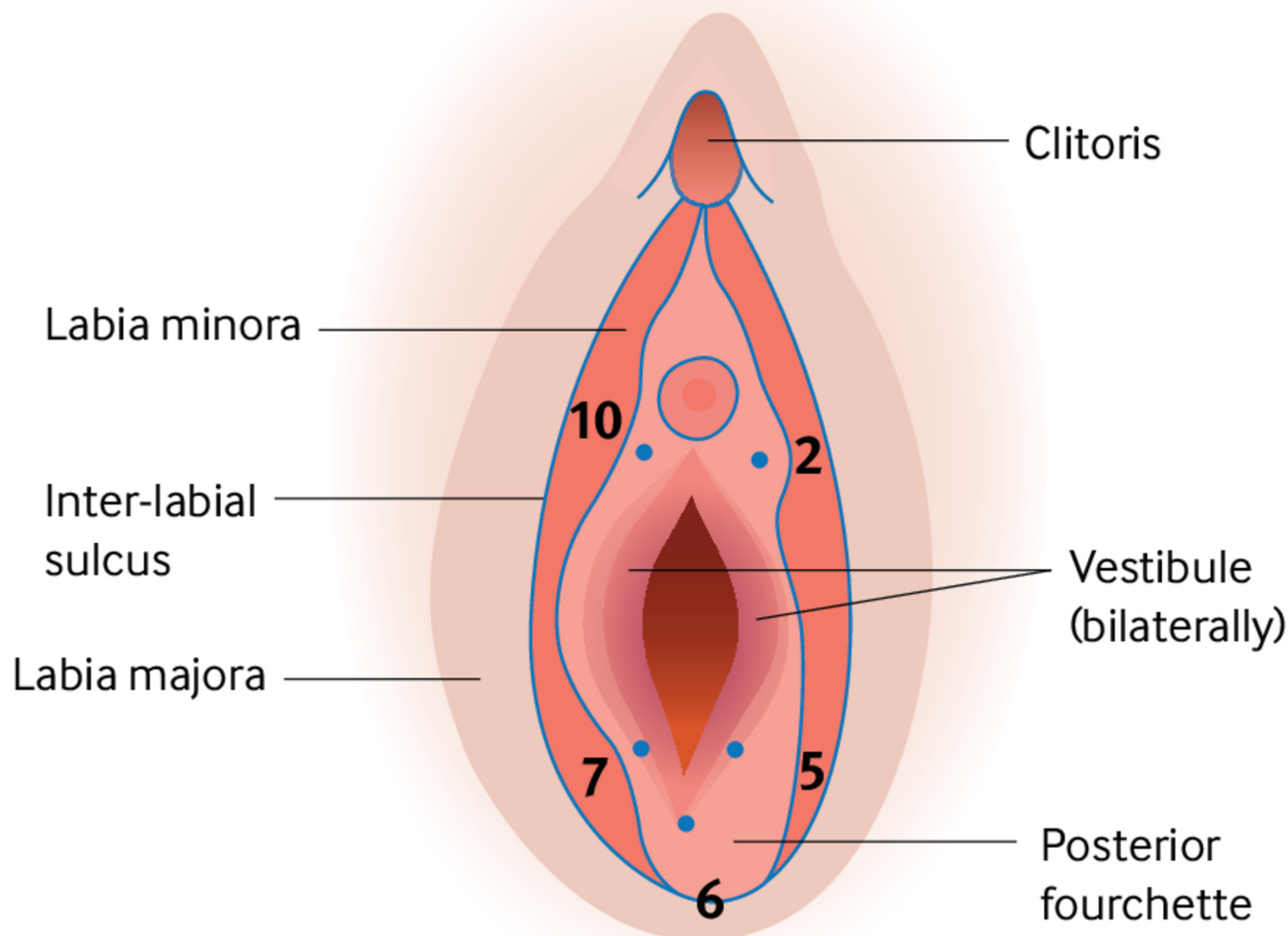


Fig 1 | Assessing pain using a variation of the cotton swab test. Begin on the inner thigh and then move medially to assess the labia majora, inter-labial sulcus, labia minora, clitoris, and vestibule bilaterally.⁶ When assessing the vestibule (just distal to the hymen), assess at 2:00, 10:00, 5:00, 6:00, and 7:00 positions systematically.⁵ According to expert opinion, major and minor vestibular gland areas (ie, 2, 10, 5, 7) and posterior fourchette (6, 5, and 7) represent the major vestibular glands, and 2 and 10 are the minor vestibular glands

Pelvic floor muscle overactivity is a common sequela of vulval pain and can also cause vulval pain, therefore should be treated in parallel. In our experience, it is reasonable to conclude that pelvic floor muscles are highly contracted in the following clinical scenarios:

- The vaginal opening appears small or narrowed
- The patient's bottom raises at the beginning of the examination
- The patient retreats when examination is attempted, or
- The patient blocks the option of examining with their hands or thighs.

In these cases, internal examination is not necessary. Targeted treatment with pelvic floor physiotherapy, where techniques differ based on severity of pelvic floor muscle overactivity and from that

offered to patients with vulvodynia alone, may help alleviate symptoms.

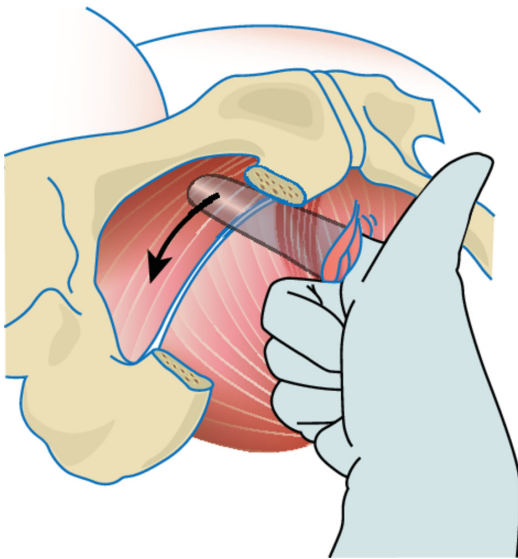
In all other cases of suspected pelvic muscle overactivity, discuss the option of performing a vaginal examination in order to assess and document the degree of pelvic floor muscle tension and response to treatment:

- If indicated, and after consent, assess tone by gently inserting a single gloved index finger with lubricant into the vagina and applying mild pressure to the centre of each muscle before sweeping along its length (fig 2)
- A narrow or tight vaginal introitus typically reflects increased tone of the levator ani muscles, whereas a more compliant and flexible opening is palpated when these muscles are relaxed. The obturator internus muscle is most effectively palpated while

the patient actively abducts the thigh, which increases tension in the muscle. When the patient relaxes the leg, the muscle softens, allowing clearer assessment of its baseline tone¹³

- Low-osmolarity, pH balanced lubricants are preferred to minimise discomfort and protect the vaginal epithelium.¹⁴

Obturator internus muscle



Levator ani muscles

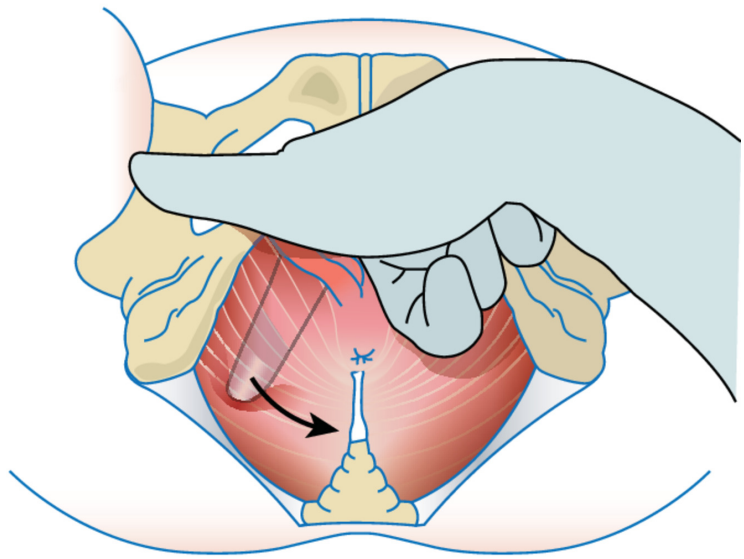


Fig 2 | Assessing pelvic floor muscle tension. The levator ani muscle group forms the main support of the pelvic floor, stabilising the bladder and rectum. The obturator internus muscle, located in the pelvic wall, connects to this group via the arcuate tendon. Both muscles should be palpated using gentle, even pressure with the index finger during examination. Tight and stiff muscles are considered hypertonic¹³

What you should do

Making a diagnosis

Since the definition of vulvodynia is vulval pain without an identifiable cause, assess for and treat other causes of pain as mentioned in [table 1](#) before considering a diagnosis.

Vulvodynia is a diagnosis of exclusion, but women can still present with both vulvodynia and another concurrent pathology (eg, recurrent vulvovaginal candidiasis or lichen sclerosus), and sometimes more than two conditions at once.¹ A cross sectional multicentre study of 1183 women with vulvodynia showed that 37.4% of women had concomitant urinary symptoms: 19.5% had recurrent urinary tract infections and 17.9% had post coital urinary tract infections.¹⁵ In this study, about one third of patients with vulvodynia reported recurrent vulvovaginal candida infections. Herpes lesions and Bartholin abscesses are diagnosed through direct clinical examination typically, because of their distinctive presentations.¹⁶

Provoked vestibulodynia (that is, pain confined to the vestibule triggered by touch) and generalised vulvodynia (spontaneous pain that affects more than just one specific area of the vulva) are the two most common types of vulvodynia.¹ According to a population based survey study of more than 19 121 women¹⁷ as well as a subset of 371 women in a prospective cohort study in the US,¹⁸ provoked vulvodynia is more common in women under 30 and generalised vulvodynia is more common in peri- or post menopause.

Overall, the yield of viral and bacterial swab and culture is not usually informative and is used mostly to rule out other possible diagnoses.⁶ Swabs may be warranted in specific scenarios—for example, microbiological confirmation of candidiasis may be

necessary if this was the suspected diagnosis and treatment has not led to substantial improvement.⁵ With the exception of suspected malignancy, some dermatoses, and concerning lesions (such as chronic eczema or dermatitis that do not respond to treatment, which could for example be the manifestation of intraepithelial Paget's disease),¹⁶ biopsies are usually reserved for refractory cases of vulvodynia. Their purpose is to rule out any other conditions that might have been missed. Otherwise, the diagnostic utility of biopsies remains uncertain.⁷

Management

Given the sensitive nature of the consultation, and the potential need for increased time to explore different aspects of vulvodynia, you may find it helpful to book a longer consultation, or schedule a follow-up soon, particularly to discuss and assess treatment.

Manage any identified pathologies related to vulval pain in line with local protocols and guidelines. For example, granulation tissue can occur as part of the healing process in perineal or vaginal tears postpartum, and can cause vulval pain. Therefore, if granulation tissue is found on examination, it can be cauterised with silver nitrate to treat the pain.¹⁹ Another common clinical scenario is when a patient experiences hormonal changes secondary to oral contraceptive use, leading to atrophy, and subsequently, pain.⁹ The standard treatment for this, other than stopping oral contraception use, is outlined in [box 1](#). These treatments may be needed even after stopping contraception. Topical oestrogen alone can be used in cases of genitourinary syndrome of menopause or lactational amenorrhoea.

Box 1: Treatment for hormonally induced vulval pain—prescribing topical oestrogen

In the clinical scenario of vulval pain secondary to oral contraceptive use or other oestrogen reducing oral medications, clinician researchers recommend:^{9 10 20}

- Treating with an off-label compounded preparation of topical oestradiol 0.03% and testosterone 0.01% to the vestibule—1 g twice daily until symptoms subside, and then 2-3 times per week for maintenance, for as long as oral contraception is being used. Oestrogen secretion should resume only following cessation of oral contraception use.
- Another option is off-label 17 beta oestradiol cream 1-4 g for 1-2 weeks, then down to half the initial dose, with 1g 1-3 times a week maintenance and 300 µg testosterone cream for 28 days.

If vulval pain persists after treatment, re-examine the patient to assess for another cause that may have been missed.

International guidelines recommend that treatment of vulvodynia is individualised and multimodal, including lifestyle modifications, psychotherapy, psychosexual counselling, pelvic floor physiotherapy, medications, and rarely, surgical interventions.^{5 16 21}

Inform the patient that vulvodynia is common and that multiple treatments are available. Teach patients appropriate vulval care such as avoiding irritants like scented or dyed products, soaps, and douches. Advise them to wash with water only, pat dry gently, and avoid clothing that worsens pain. Recommend use of plain cotton underwear, no synthetic fabrics, and sleeping without underwear.¹⁶ Inform them of patient support groups and resources locally and online.

Lubricants are recommended for patients who have pain during sexual intercourse. Oil based lubricants are not condom compatible, and silicone may be preferred to water based because many water based lubricants have high osmolality that can cause mucosal damage, irritation, itching, and burning.²² As most lubricants can negatively affect sperm motility and viability, only in those trying to conceive, consideration should be made for using water based products, specifically targeting a pH of 7.2-8.5 and osmolality between 270 and 360 mOsm/kg to be sperm friendly.²² Discuss other forms of sexual activities that exclude vaginal penetration.²³

Pelvic floor physiotherapy and psychotherapeutic interventions

The 2014 American Society for Colposcopy and Cervical Pathology guidelines and 2021 European guidelines recommend a multi-modal approach, with pelvic floor physiotherapy alongside psychosocial therapies as first line treatment for patients with vulvodynia. These treatments are recommended for both localised and generalised vulvodynia, although the benefits of pelvic floor physiotherapy in unprovoked vulvodynia are not established.^{5 16} In our experience, patients with associated pelvic floor overactivity that is severe are likely to require pelvic floor physiotherapy treatment more intensely and for a longer period than those without pelvic floor overactivity.

Based on the severity of pelvic floor tension, physiotherapists may also use a variety of other treatments including breathwork, pacing, and exposure based therapies to help alleviate symptoms of overactivity.²¹

Pelvic floor physiotherapy, which may involve direct manual exercises with the vagina or rectum, can improve pelvic function by reducing pelvic floor muscle tension. Pelvic floor physiotherapy can also significantly improve patients' sex related function and satisfaction.²⁴ A systematic review of pelvic floor physiotherapy for provoked localised vulvodynia, assessing 43 studies (including 20 prospective cohort, five retrospective cohort, and seven randomised controlled trials, RCTs), found improvements in both sexual pain and sexual function.²⁵ Key limitations included lack of control groups, small sample sizes, and variation in physiotherapy techniques.

A 2025 systematic review, including eight RCTs of 689 participants with any type of vulvodynia, evaluated various forms of psychotherapeutic interventions.²⁶ Six studies compared cognitive behavioural therapy (three individually, two in groups, and one in couples) with either drug treatments (topical corticosteroids, topical lidocaine), or with other methods of psychotherapy.

Within this review, four studies showed a statistically significant reduction in vulval pain in the intervention groups (types of psychotherapy) compared with the control groups (two drug treatment groups, and two different types of psychotherapy groups). These results were found at six months' follow-up after the treatment, following a range of eight to twelve therapy sessions. In comparison with topical lidocaine or corticosteroids, cognitive behavioural therapy significantly reduced pain catastrophising and improved sexual function. Cognitive behavioural therapy also significantly reduced anxiety and sexual dysfunction compared with lidocaine.

Although pelvic floor physiotherapy and psychotherapy are considered first line treatments, additional well designed RCTs are still needed.

Based on international guidelines, other options to address distress and improve coping with pain may include mindfulness, sex therapy, or couples therapy.^{5 16} Patients may choose to be treated alone or with a partner. In addition to a psychotherapist, patients may find benefit from seeing a sexologist/sex therapist if they are interested and the service is available.

Neuropathic pain medications**Oral preparations**

As summarised in [table 2](#), oral neuropathic pain medications are recommended as second-line treatments in international guidelines,^{5 16} primarily owing to risk of side effects and inconsistent efficacy across studies.^{27 29} However, if vulvodynia is generalised, we advise that they be considered first line.

Table 2 | Selected commonly used oral medications as second line treatments for vulvodynia^{5 16 27}

Agent	How to prescribe	Side effects and advice	Evidence
Tricyclic antidepressant: amitriptyline or desipramine	Start 10-25 mg at bedtime. Increase by 10-25 mg every 1-2 weeks as tolerated. Usual effective dose 25-75 mg. Maximum dose: rare to need more than 100 mg/day	Dry mouth, dizziness, constipation, sedation. Caution using in older adults and start at 10 mg in this group. Nortriptyline may be better tolerated owing to fewer side effects. Do not stop suddenly but taper down by 25 mg every 3-4 days ^{6 28}	Both have similar efficacy for neuropathic pain. Studies for vulvodynia did not show benefit but did not separate those with localised from generalised vulvodynia ^{5 29 30}
Gabapentin	Start 300 mg at bedtime. Increase every three days by 300 mg in divided doses three times a day based on patient tolerance and pain control. Usual effective dose is 1200-1800 mg/day. Maximum dose is 3600 mg/day	Sedation, fatigue, dizziness, ataxia. Rarely peripheral oedema, mood effects (depression, anxiety). Needs dose adjustment with renal impairment, Often better choice in older adults than tricyclic anti-depressants	Two RCTs did not show benefit in vulvodynia for pain but improved sexual function, and did not separate those with localised from generalised vulvodynia ^{31 32}

Tricyclic antidepressants, specifically desipramine and amitriptyline, are two of the most prescribed and studied oral neuropathic pain medications. A RCT of 107 participants with localised provoked vulvodynia comparing desipramine (alone or combined with topical lidocaine) with placebo found no significant difference in pain reduction during intercourse or on physical examination between the groups when assessed before and after 12 weeks of treatment.³⁰ Another RCT in 53 women with generalised vulvodynia compared self-management, low dose amitriptyline (10-20 mg/day), and low dose amitriptyline plus topical triamcinolone.³³ Among 43 participants who completed the trial, there were no statistically significant differences in pain scores among the three groups when assessed at 12 weeks of treatment.

Conversely, smaller observational and descriptive studies suggest benefit with amitriptyline at 40-60 mg/day (higher doses than recommended in other studies), where about 50% of patients experienced moderate or greater improvement in pain.³⁴ However, these findings lack confirmation in RCTs. Despite the absence of high quality evidence, international guidelines recommend using tricyclic antidepressants and gabapentin because of their neuropathic pain modulating properties, their established efficacy in other neuropathic pain conditions, clinical experience supporting benefit in some patients, and the lack of more effective evidence based alternatives.^{5 16 21}

In our experience, pain relief often takes at least two to four weeks at therapeutic doses, and we aim to increase to the highest dose recommended as tolerated. Some studies suggest increasing dosage during three to eight weeks prior to assessing pain relief, followed by at least one to four weeks thereafter.^{5 16 27} We also add another oral agent from another family (ie, a tricyclic antidepressant and gabapentin) if patients report some efficacy but insufficient pain relief once they are at the maximum tolerated dose of single agent therapy.

Topical preparations

These medications are also available as compounded creams, to reduce systemic side effects, but the efficacy of topical agents remains controversial. Although 4-5% topical lidocaine has been used historically, its use during intercourse is now controversial. In a RCT comparing monotherapy with oral desipramine, topical lidocaine, topical compounded cream containing ketamine, and placebo for localised provoked vulvodynia, lidocaine was found to be the least useful for vulval pain, even in comparison with placebo.²⁹

Based on our experience of patients' disclosures, temporary pain reduction can facilitate intercourse for a partner's benefit rather

than promote symptom improvement for the patient. Furthermore, patients may dislike the sensation of their skin being numb, particularly during penetrative intercourse. When patients decide to use lidocaine for temporary symptom relief, counsel them that skin sensitivity may develop following use.^{5 24 29} In a RCT of 195 women comparing pelvic floor physiotherapy with lidocaine, when assessed post treatment at 10 weeks, 1% of women in the lidocaine group developed a dermatitis reaction to lidocaine, and 15% of women felt some irritation or burning.²⁴

When to refer

Most patients with vulvodynia can be cared for by general practitioners with an individualised, multi-modal treatment approach. Consider referral:

- To specialised pain clinics if patients have more than one pain syndrome or if pelvic floor physiotherapy, psychotherapeutic interventions, or neuropathic pain medications do not help.
- To gynaecologists or dermatologists in cases of lichen sclerosus or lichen planus, because of their progressive potential and increased risk of vulvar malignancy.
- To gynaecologists for consideration of vestibulectomy, a surgical procedure that removes the sensitive tissue of the vulvar vestibule to relieve pain, particularly in cases where neuroproliferation is thought to be the cause. It is considered a last resort and reserved for refractory cases of localised provoked vulvodynia.^{16 35} A 2024 systematic review reported vestibulectomy to be successful in 15 of 29 studies, with reductions in dyspareunia (52-93%), improvements in sexual function (57-87%), and patient satisfaction rates of 79-93%. Bartholin cysts were the most common complication, occurring in 9%. These studies are limited by short follow-up times.³⁵

Since vulvodynia management is highly individualised, prognosis is difficult to predict. With appropriate multidisciplinary care, many patients experience significant improvements in quality of life, and some achieve complete pain resolution.

Education into practice

- How do you investigate for possible causes of vulval pain in your history and examination?
- How often do you refer patients with chronic vulval pain to pelvic floor physiotherapy or any kind of psychotherapy?
- In whom might you offer a trial of amitriptyline or gabapentin?

How patients were involved in the creation of this article

A patient with vulvodynia who runs an international patient podcast and support network reviewed this article. Their feedback led to an emphasis on how vulvodynia affects quality of life, and that urinary symptoms are commonly associated with vulval pain. We emphasised hormonally mediated vulval pain because, as the patient noted, it is often missed and treatable. Furthermore, the patient advised to remove recommendations for topical lidocaine as its use has become controversial.

How this article was created

We searched PubMed for recent guidelines and research publications and reviewed talks from international courses through the International Society of the Study of Vulvovaginal Disease and the International Society for the Study of Women's Sexual Health. We discussed the content with other experts and reflected on our own clinical practice. We reviewed national and international guidelines, however some lack updated data.

Resources for patients:

- Podcast Tight Lipped: <https://www.tightlipped.org/podcast>
- National Vulvodynia Association: <https://www.nva.org/>
- Vulval Pain Society: <https://vulvalpainsociety.org/>
- The Vulvodynia Toolkit: <https://www.vulvodiniatoolkit.com/resources>

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Provenance and peer review: commissioned; externally peer reviewed.

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