Management of common vulval conditions

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ABSTRACT

- Community-based surveys indicate that about a fifth of women have significant vulval symptoms lasting over three months at some time in their lives.
- Common causes of itch or pain are dermatitis, recurrent candidiasis and the recently recognised pain syndromes — vulvar vestibular syndrome and dysaesthetic vulvodynia.
- Diagnosis is usually apparent after a thorough history and examination, although conditions commonly coexist and are complicated by prior treatment.
- Skin lesions not responding to treatment require biopsy.
- Treatment aims to control symptoms rather than to cure; avoiding soaps and other irritants is central to management.
- An early, accurate diagnosis should enhance management of vulval conditions, particularly pain syndromes.

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VULVAL SYMPTOMS ARE COMMON and cause considerable distress.[1] In a community-based sample of 303 women in the United States, about one in five reported a history of lower genital tract discomfort that had persisted for more than three months, and one in 10 had current symptoms. [1] Two-thirds of those with discomfort reported knife-like pain or excessive pain on contact to the genital area, and one-third reported persistent itching or burning. Not only are symptoms common, they are also often chronic and can substantially interfere with sexual function.[1] Correct diagnosis and treatment in general practice should reduce morbidity. Treatment often requires a considerable commitment by both the patient and practitioner, but is usually successful.

Despite the frequency of vulval symptoms, women often find it difficult to obtain expert medical advice.[1] Postgraduate training for general practitioners is not widely available, and special clinics for vulval conditions have long waiting lists. Here, we outline a pragmatic approach to management of chronic vulval symptoms. Some useful websites for practitioners and patients are listed in Box 1.

History and examination

The history may be difficult to elicit because of anxiety about the diagnosis, frustration about ineffective treatment, secondary sexual dysfunction or resultant and often under-recognised depression.[2] When itch is the predominant symptom (with or without pain), the key feature is whether the condition is intermittent or constant. If symptoms are worse before or during menses, then recurrent vulval vaginal candidiasis is likely.[3] Dermatitis can also be intermittent, with flares associated with precipitating factors.

A thorough examination with adequate lighting is essential, as changes can be subtle. The key clinical distinction is between women whose appearance on examination is essentially normal and those with clear abnormalities. Assessing pelvic floor muscle tone is necessary if penetration is painful, and attempting to elicit pain in the vestibular area with a cotton bud is useful for women with a history consistent with vulvar vestibular syndrome.[4]

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Key features of the history and examination that are useful in diagnosing vulval conditions are shown in Box 2. For example, a young woman presenting with localised pain in the vestibular area that is provoked only by penetration and has no abnormalities on examination is likely to have vulvar vestibular syndrome (VVS). In contrast, an older woman with poorly localised pain that is not provoked and appears normal on examination may have dysaesthetic vulvodynia. Pain may take the form of burning, stinging, rawness, or severe knife-like pain.

Investigations

Investigations should fine-tune the clinical diagnosis, which is usually apparent. A vaginal or vulval swab should be Gram stained and cultured for *Candida* spp. in women with suggestive symptoms, as candidiasis can often coexist with other conditions. If fissures or ulcers are present, testing for herpes simplex virus by polymerase chain reaction should be performed. Appropriate investigations for a vaginal discharge should also be performed, as this can cause a secondary dermatitis (eg, bacterial vaginosis). Biopsy is required for any abnormal examination finding that persists for more than six weeks without a clear diagnosis.

Management

It is important to establish realistic expectations at the beginning, as vulval conditions commonly respond slowly to treatment, usually over weeks to months. The aims of therapy are to control symptoms rather than to cure the condition. A multidisciplinary approach may be needed, as may referral to other healthcare professionals, such as physiotherapists with

1: Useful websites for clinicians and clients

International Society for the Study of Vulvovaginal Disease (www.issvd.org)
National Vulvodynia Association (www.nva.org)
Melbourne Sexual Health Centre (www.mshc.org.au)
Vulval Pain Society (www.vul-pain.dircon.co.uk)
National Lichen Sclerosus Support Group (www.lichensclerosus.org)

experience in biofeedback (use of vaginal surface electromyography, digital palpation or dilators to teach voluntary control of pelvic floor muscles) for secondary vaginismus, or sexual counsellors. Specific treatments are outlined below, but the principles of good vulval skin care should be part of the treatment of all conditions (Box 3). Women whose symptoms are not responding to treatment after two months, or who have vulval intraepithelial neoplasia or erosive vulvovaginitis, should be referred to a gynaecologist.

Conditions with abnormalities on examination

Dermatitis

The term dermatitis describes a poorly demarcated erythematous, itchy rash (Box 5) that is characterised histologically by spongiosis.[5] Subtypes include atopic, seborrhoeic, irritant, allergic and corticosteroid-induced dermatitis, and lichen simplex chronicus.[5] Dermatitis is common and was present in 54% of women presenting with chronic vulval symptoms to an Australian dermatology practice.[6] It is more common in individuals with atopy, whose skin is less able to tolerate environmental insults. Contact allergens have been identified in 5% to 26% of women diagnosed with vulval dermatitis, commonly medications.[6,7]

Itch is a common presenting symptom, although burning can occur if the mucosa is involved.[6,8] Clinical signs may be subtle and include poorly defined erythema, scale, fissures, lichenification and excoriation.

Common causes of irritation are outlined in Box 4 and should be carefully sought. Ongoing avoidance of irritants and minimisation of incontinence are important in controlling symptoms.[9] Therapy should begin with a potent topical corticosteroid (eg, methylprednisolone aceponate) until symptoms have resolved (E1)[10] (for an explanation of level-of-evidence codes, see Box 6). At this point, a weaker corticosteroid, such as 1% hydrocortisone, can be continued for a further two to three months. This cycle can be repeated if disease activity flares. Drugs with antihistamine and sedative properties, such as doxepin (10–20 mg at night), can be helpful in controlling nocturnal scratching (E4).[12]

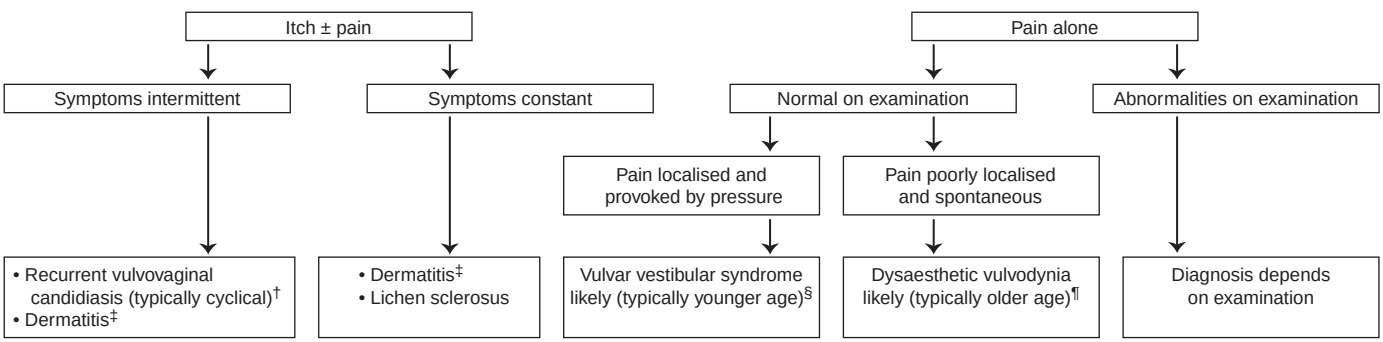
Recurrent vulvovaginal candidiasis

Vulvovaginal candidiasis is considered recurrent when at least four discrete documented episodes occur in one year, or at least three in one year that are not related to antibiotic therapy.[13] The condition is common; in one random community sample, one in 12 women reported four or more episodes in the previous year.[14] The pathophysiology of recurrent infection is unclear, but appears to involve an abnormality in the host–microorganism relationship.[3,15]

Recurrent vulvovaginal candidiasis presents primarily with itch, but burning, especially after intercourse, is also common.[3] It is characteristic for these symptoms to flare in the week before menses and to improve with the onset of menstruation. Clinical appearance is often not helpful in making the diagnosis.[3] Vulval erythema, subtle swelling and occasionally longitudinal fissures may be seen, but the vaginal discharge of acute candidiasis is uncommon.[3] Microscopy of low vaginal swabs for hyphae is negative in up to 50% of women with culture-positive symptomatic vulvovaginal candidiasis.[3] *Candida albicans* is also present in up to 20% of asymptomatic women of childbearing age.[3] Most cases are caused by *C. albicans*, but the species *C. glabrata*, *C. tropicalis* and *C. parapsilosis* also occur and may be relatively resistant to treatment.[3]

About 90% of uncomplicated cases of vulvovaginal candidiasis respond to oral or topical antifungals, although a secondary irritant contact dermatitis from topical imidazoles may occur (E2).[8,16,17] Data from non-randomised clinical trials support longer treatment (14 days) for recurrent vulvovaginal candidiasis, followed by a maintenance regimen for six months (E3).[8,16] Some recommended main-

2: Diagnosis of common chronic vulval conditions*



* This algorithm is a general guide only; there is considerable overlap between conditions, and multiple conditions often coexist in the one patient.
† Vulvovaginal candidiasis is rare in postmenopausal women, unless they are taking hormone replacement therapy or have poorly controlled diabetes.
‡ In dermatitis, excoriation is common, and the rash may extend beyond the flexures.
§ Vulvar vestibular syndrome is characterised by cotton bud sensitivity in the vestibular area.
¶ Dysaesthetic vulvodynia is poorly localised in the distribution of the pudendal nerve.

tenance regimens include clotrimazole (500 mg vaginal suppositories weekly), oral ketoconazole (100 mg daily), oral fluconazole (100–150 mg weekly) and oral itraconazole (400 mg monthly or 100 mg daily).[16,17] Compliance is better with oral therapy, which also avoids the irritation of topical treatments.[3,8] An estimated one in 10 000–15 000 persons exposed to ketoconazole may develop hepatotoxicity.[16] If there is a significant dermatitic reaction, 1% hydrocortisone ointment is useful, at least in the early stages. About 70% of women with *C. glabrata* or other non-*albicans* species respond to intravaginal boric acid (600 mg daily in a gelatin capsule for 14 days [E3]).[16,17] Topical flucytosine (4%) has also been used (E3).[16,17]

Treatment strategies for which there is little or no evidence include dietary modification (eg, sugar-free diet), antifungal treatment to eliminate *Candida* spp. from the gastrointestinal tract,[18,19] and treatment of asymptomatic male sexual partners for *Candida* spp.[20,21] Combined pills can be continued as long as the oestrogen dose is low (20–30 μg ethinyloestradiol), and occasionally progesterone-only contraception may be tried (E4).[22]

Lichen sclerosus

Lichen sclerosus was found in 13% of 141 women presenting to an Australian dermatology practice with chronic vulval symptoms.[6] It is an idiopathic inflammatory skin disease that has a predilection for the genital skin. It has been linked to a several autoimmune diseases, including Grave's disease and vitiligo.[23]

Lichen sclerosus most commonly presents with pronounced itch, although burning and dyspareunia can also occur.[24] It may occur anywhere over the vulval, perineal or perianal skin and is uncommon at extragenital sites.[24] The vagina is not involved. Typically, it presents with well defined white plaques and an atrophic, wrinkled surface (Box 7). There may also be purpura, hyperpigmentation, erosions, fissures and oedema.[24] Longstanding disease may result in labial shrinking, obliteration of the clitoral hood and occasionally restriction of the introitus, resulting in difficult and painful intercourse.[24]

The diagnosis should be confirmed by skin biopsy (Box 7). Treatment should aim to control symptoms, minimise scarring and detect malignant change early. Potent topical corticosteroids are symptomatically effective in over 90% of women, providing rapid symptomatic relief and variable objective improvement (E4).[25] Betamethasone dipropionate ointment (0.05%) is used initially twice daily for a month, then daily for two months, and gradually tapered to use as needed (ideally only once or twice per week). Annual follow-up is recommended, as longitudinal studies suggest that the lifetime risk of squamous-cell carcinoma within the affected area is about 4%.[26]

3: Initial skin management for women with vulval pain or itching

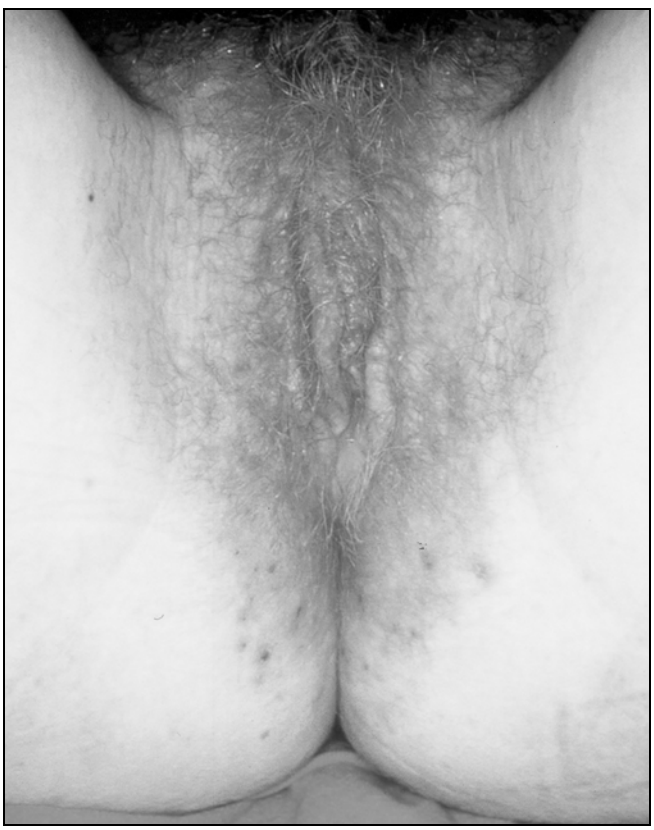
- Avoid irritants (Box 4).
- Moisturise dry skin with creams such as Sorbolene or aqueous cream (these are often more soothing if kept refrigerated).
- Use barrier creams, such as zinc and castor oil cream or Vaseline, if there is incontinence or vaginal discharge.
- Reduce scratching as much as possible by applying cold compresses.
- Application of potassium permanganate solution (1:8000) 2–3 times daily for 3–5 days is often helpful.
- Ensure there is adequate arousal and use lubricants for limited sexual intercourse; vegetable oils are less irritant than water-based lubricants.

4: Common vulval irritants

- *Body fluids:* sweat, vaginal secretions,* urine and semen.
- *Hygiene products:* soaps, gels, bath oils, bubble bath, douches, perfumes,† deodorants,† depilatory creams and sanitary pads.†
- *Medicaments:* disinfectants,† tea tree oil,† preservatives in creams,† antifungal creams,† topical anaesthetics† and topical antibacterial agents.†
- *Lubricants and contraceptives:* spermicides,† condoms† and diaphragms.†
- *Physical items:* sanitary pads and tampon strings, tight clothing, synthetic underwear, toilet paper, overzealous cleansing and scrubbing, shaving and plucking of hair.

* Including abnormal vaginal discharge requiring treatment.
† Some chemicals may also cause true allergic contact dermatitis.

5: Dermatitis of the vulva



Dermatitis, showing poorly defined erythema extending beyond the flexures with excoriations.

6: Level-of-evidence codes

Evidence for the statements made in this article is graded according to a modification of the NHMRC system for assessing the level of evidence.[11]

E1 Level I: Evidence obtained from a systematic review of all relevant randomised controlled trials.

E2 Level II: Evidence obtained from at least one well designed randomised controlled trial.

E3 Level III: Evidence obtained from at least one non-randomised controlled trial, cohort or case–control studies.

E4 Level IV: Evidence obtained from case series, either post-test, or pre-test and post-test.

Psoriasis

Psoriasis is less common than lichen sclerosus and was present in only 5% of women presenting to a dermatologist with chronic vulval symptoms.[6] It can be easily mistaken for atopic dermatitis, but clues include a family history of psoriasis and evidence of psoriatic lesions elsewhere on the skin (scalp, natal cleft or nails). Clinically, psoriasis on the vulva may lack scale, but it tends to be more symmetrical, erythematous and well defined than dermatitis.

Psoriasis often requires more aggressive and prolonged treatment than dermatitis. Weaker-potency corticosteroids, such as 1% hydrocortisone, are often insufficient for maintenance, and a stronger corticosteroid, such as betamethasone valerate (0.02% twice daily), is often needed[27] (E2). Weak tar preparations, such as 3% liquor picis carbonis in aqueous cream twice daily, is an alternative to provide a break from continuous corticosteroid use[27] (E2).

Vulval intraepithelial neoplasia

In a series of 69 Australian cases, vulval intraepithelial neoplasia (VIN) was diagnosed in only 7% of women in a gynaecology practice and none of those in a dermatology practice.[9] The most common symptoms are localised itch and burning, although two-thirds of cases are asymptomatic.[28] VIN usually appears as multifocal plaques that are raised on keratinised skin or macules on mucosal areas. VIN3 (severe neoplasia or carcinoma-in-situ) can progress to invasive cancer, but the rate at which this occurs is controversial.[28] Cases of VIN should be referred for further assessment to a gynaecological oncologist.

Erosive vulvovaginitis

Some less common diseases may cause chronic painful erosions and ulcers with superficial bleeding within both the vulvar vestibule and the vagina. These include erosive lichen planus, cicatricial pemphigoid, pemphigus vulgaris, fixed drug eruption, lichenoid vaginitis and desquamative inflammatory vaginitis. As vulval and vaginal adhesions can occur if these conditions are not properly managed, specialist referral is recommended.

Atrophic vaginitis

Oestrogen deficiency causes the vaginal epithelium to become thin, pale and dry.[29] Symptoms include superficial dyspareunia, minor vaginal bleeding and pain from splitting caused by friction.[29] Topical vaginal oestrogen creams are beneficial (E4).[29] Oestriol cream or pessaries are used daily for three weeks and then once or twice a week for maintenance.

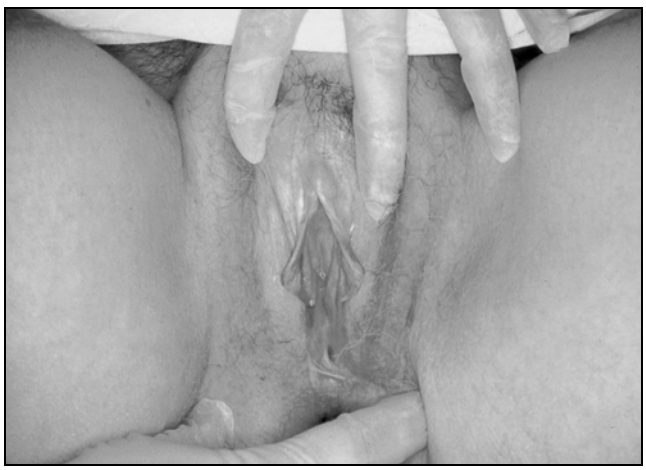
Conditions with minimal clinical findings

Vulvar vestibular syndrome

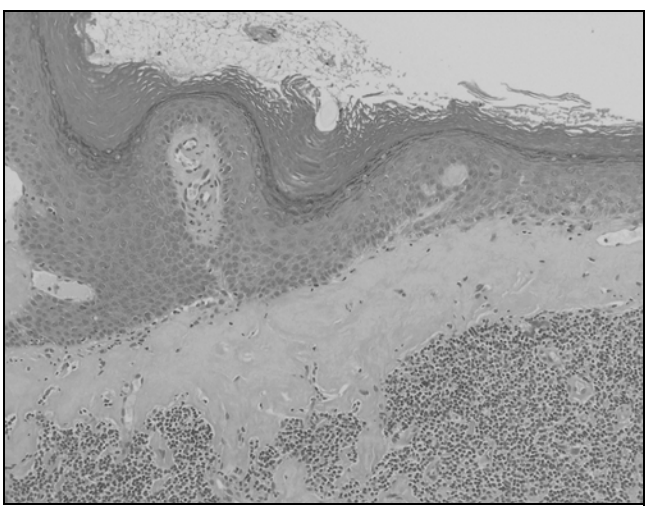
Vulvar vestibular syndrome (VVS) is also known as vestibulitis, vestibulodynia, vestibular pain syndrome and localised vulval dysaesthesia. Its exact prevalence is difficult to estimate, but studies suggest it may be more common than is recognised. Among 210 women attending a US gynaecological practice, 15% fulfilled the criteria for VVS, and 38% had some clinical features.[30] In a community-based survey, 12% of 303 women reported a history of knife-like or excessive pain on contact to the genital area that would be consistent with the syndrome.[1] At the specialised vulval clinic at Melbourne Sexual Health Centre, VVS was diagnosed in 30% of 159 consecutive clients seen in 1997–1998 (unpublished data).

Altered pain perception is the major feature of this syndrome.[31,32] The typical patient is a nulliparous woman in her 20s or early 30s who often develops symptoms suddenly.

7: Lichen sclerosus



Early lichen sclerosus, showing white areas in the interlabial sulci.



Microscopic appearance, showing thickened stratum corneum over a thinned epidermis, and a variable lymphocytic infiltrate in the dermis. (Photo courtesy of Dr Graham Mason, Melbourne Skin Pathology, VIC.)

The pain is characterised by extreme tenderness to pressure within the vulvar vestibule. Pain with attempted vaginal entry is the most common complaint. In the absence of localised pressure, women are symptom-free. It may follow a precipitating inflammatory condition or occur spontaneously.[4] With time, this sensitivity to pressure or stretch may preclude intercourse or the insertion of tampons. Pain characteristically may improve after initial penetration. Many women have associated urinary symptoms (frequency and bladder irritability) in the absence of infection, which have raised suggestions that this syndrome is associated with interstitial cystitis.[33] This may be explained by the shared embryological development, and therefore innervation, of the bladder and vestibule from the urogenital sinus.

Physical signs are restricted to exquisite tenderness in the region of the posterior (and less commonly the anterior) vestibule. Gentle pressure with a cotton swab commonly elicits pain.

Management is often difficult and prolonged and involves both behavioural and medical interventions that are common to many pain syndromes.[34] Coexisting disease (such as candidiasis) should be excluded, and irritants avoided (E4). Sympathy and strong positive reassurance are required, and sexual counselling should be offered. A number of treatments have been tried, including xylocaine gel 30 minutes before intercourse and pelvic floor retraining with biofeedback, as vaginismus is common (E3).[35] Low-dose tricyclic antidepressants, such as amitriptyline 10–75 mg at night, may be helpful in some patients (E4),[36] and newer agents for neuropathic pain show promise (E4).[37] In cases that do not respond to medical treatment, surgery (forms of vestibulectomy) may offer relief (E4),[38] but is rarely performed in Australia.

Dysaesthetic vulvodynia

Dysaesthetic vulvodynia (also known as essential vulvodynia and generalised vulval dysaesthesia) occurs mainly in older patients. The predominant symptom is chronic, poorly localised vulval burning or pain.[39] No abnormalities are found on examination, but there may be diffuse and variable hypersensitivity and altered perception to light touch. The exact aetiology is unclear, but the condition shares some features with neuropathic pain syndromes (eg, poor localisation, persistence after removal of the noxious stimulus, little response to routine analgesia, and often a burning quality). Referred pain from the back or pelvis and recurrent herpes simplex should be excluded. If the description of the pain is bizarre or inconsistent, psychogenic pain should be considered but is rare.

Low-dose tricyclic antidepressants (eg, amitriptyline, 10–75 mg at night) is the standard treatment for dysaesthetic vulvodynia (E4).[39] Gabapentin,[37] desipramine, imipramine[40] and venlafaxine[41] have also been reported as beneficial (E4).

Competing interests

None identified.

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