Review The postmenopausal vulva

Author Abigail Kingston

Key content:

- Vulval symptoms are common among postmenopausal women.
- A wide range of pathology underlies often similar presentations.
- Vulval care with emollients is the first-line treatment in most vulval conditions.
- Vulval disease is a growing specialty across gynaecology, dermatology and genitourinary medicine.

Learning objectives:

- To recognise the impact of vulval health on quality of life.
- To use a systematic approach to clinical diagnosis in most cases.
- To recognise cases requiring vulval biopsy.
- To promote uniformity in nomenclature and treatment.

Ethical issues:

- Should women with vulval disorders be seen by multidisciplinary teams or by vulval specialists?

Keywords atrophic vulvovaginitis / contact dermatitis / lichen planus / lichen sclerosus / lichen simplex chronicus / vulvodynia

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Introduction

The postmenopausal vulva shows remarkable resistance to external irritation, in contrast to aged skin elsewhere on the body.[1] There are, however, several changes in ageing vulval skin that do predispose to mechanical and chemical injury over time. The vulva is close to the rectum, which harbours bacterial pathogens, and the relative hydration of the vulva increases its overall susceptibility to injury. Furthermore, with the menopause comes compromise in barrier function. This is due in part to estrogen deficiency and in part to ageing, both of which cause a rise in skin pH from its usual acidity, resulting in a decrease in the antimicrobial defences of the skin.[1,2] There is also a loss of lipid production, which slows healing in response to injury[1] and perhaps explains why restoration of lipids by topical application, for example of linoleic acid, is so useful in vulval care. Finally, cell-mediated immunity is less efficient in ageing skin and this also is considered to increase the risk of infection.[1]

In spite of being less permeable to irritants than other aged skin, vulval skin is particularly vulnerable to excessive cleansing and abrasion from clothing or panty liners and ammonia,[1] which is often present where there is urinary incontinence. Cream bases, which contain propylene glycol, parabens and fragrances, can often cause irritation and, therefore, ointments are preferable.

Box 1 shows the conditions that affect the postmenopausal vulva. The vulval history should be tailored to reach a differential diagnosis; this is a mixture of questions instinctive to a gynaecologist and familiar to a dermatologist. An example is provided for reference in **Box 2**.

Atrophic vulvovaginitis

The menopause is big business in the medical and pharmaceutical worlds and it is easy to see why. Whereas vasomotor symptoms of the menopause will be alleviated in time in the majority of cases, vulval symptoms progress with age. The Women's Health Initiative data[2] revealed that vulvovaginal symptoms, including dryness, irritation and itching, affect up to 27% of postmenopausal women and other studies have supported this observation.

Vulval atrophy is common after the menopause and often presents with nonspecific symptoms of dryness, dyspareunia, soreness and irritation. Urogenital symptoms and postmenopausal bleeding can also be associated with atrophy caused by estrogen deficiency, as the vaginal walls become thinner with loss of collagen and increased friability.

Dyspareunia may be experienced by as many as 40% of sexually active menopausal women but, as only a third of women seek help for vulvovaginal symptoms of any kind,[2] those who do make it in to our clinics deserve specific enquiry as to the presence of any sexual dysfunction.

Examination of the atrophic vulva reveals pallor, loss of rugation, petechiae and loss of pubic hair. Loss of adipose tissue is common and among some women there may be labial fusion, introital narrowing or even stenosis. It is essential to exclude other diagnoses such as those mentioned below.

Treatment of vulval symptoms should always begin with general vulval care. The removal of causes of irritation to the vulval skin is of paramount importance and is the aspect of treatment most likely to be forgotten by the gynaecologist and ignored by the woman (**Box 3**).

The British Menopause Society's summary practice points[3] regarding hormone replacement therapy (HRT) include the following:

- In the UK most women who request HRT do so for symptom relief, often using it for a short time (less than 5 years), and it is the most effective treatment.
- Given appropriately, the benefits of HRT outweigh any risks and its use should not be restricted.

The North American Menopause Society has specific recommendations[2] regarding vulvovaginal symptoms, including the following:

- [Primary goals] are symptom relief and reversal of atrophic anatomical changes.
- When low-dose estrogen is administered locally for vaginal atrophy, progestogen is generally not indicated.
- Prescription vaginal estrogen delivery is effective and well tolerated in treating vaginal atrophy.
- Vaginal estrogen therapy should be continued for as long as women have distressing symptoms.

Systemic HRT is indicated only for the treatment of vasomotor symptoms.

Lichen sclerosus

(See **Figure 1** and **Figure 2**.) A common dermatosis affecting mainly the vulval, perineal and perianal skin of the postmenopausal woman, lichen

Box 1
Vulval conditions associated with the menopause

Common	Less common	Rare
Atrophic vulvitis	Squamous cell carcinoma	Lichen planus
Lichen sclerosus	Paget disease	
Irritant dermatitis	Vulvodynia	
Lichen simplex chronicus		

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Box 2
Example of vulval history

History of presenting symptom	Itch, night-time scratching
	Pain: provoked, unprovoked
	Duration of symptoms
	Onset
	Exacerbating/relieving factors
Vulval hygiene	Bath/shower
	Skin cleansing agents
	Moisturisers
	Baby wipes
	Panty liners
	Urinary incontinence
Past medical history	Skin disease
	Atopic disease
	Autoimmune disease
Gynaecological history	Smears, past and present
	Hysterectomy, oophorectomy
	Date of menopause and its effects
	Sexual history
	Obstetric history
Drug history	Topical treatments tried and their effects (self-administered or prescribed)
	Other medication and periods of use (including HRT)
Social history	Impact of vulval symptoms on quality of life
	Occupations
	Family members

Box 3
Vulval care

Do not	Do
use soap, shower gel or detergent to cleanse	use a soap substitute, such as cetomacrogol, aqueous cream or Epaderm®[a]
shampoo hair in the bath or shower	shampoo over a basin
use bubble bath, oils or disinfectants in the bath	use substitutes such as Oilatum®[b] or Balneum®[c] in the bath
wear tight or synthetic material trousers or briefs	wear cotton knickers, skirts, loose garments
wear panty liners	avoid panty liners and address incontinence
wash excessively	use plenty of emollients
use wet wipes, feminine wipes, etc.	

[a]Soft paraffin; Medlock Medical, Oldham, UK
[b]Liquid paraffin; Stiefel, High Wycombe, UK
[c]Urea 5%; Crookes, Hull, UK

sclerosus manifests often as a chronic relapsing disease which is managed symptomatically. Lichen sclerosus has a predilection for genital skin and can be found among adults of both genders and prepubertal girls. Extragenital lesions are found in approximately 11% of cases (**Figure 3**). The terminology used for lichen sclerosus has been standardised by the International Society for the Study of Vulvovaginal Disease (ISSVD) and the expression 'lichen sclerosus et atrophicus' is no longer used, as not all lichen sclerosus is atrophic. 'Leucoplakia' and 'kraurosis vulvae' are out-of-date terms. The evidence base surrounding management of lichen sclerosus is poor and established guidance is based on best practice.[5] Aetiology remains unknown, several authors suggesting autoimmune involvement, and there is certainly association with other autoimmune diseases. Presentation is usually with intense vulval itching, but soreness or burning may be the primary symptom, particularly where there has been chronic itch. Pruritis is often worse at night and many women have disturbed sleep. Asymptomatic lichen sclerosus is also seen; treatment in these instances is probably only needed if there is evidence of active disease.

Clinical diagnosis of lichen sclerosus is accepted as standard practice, with histology reserved for diagnostically difficult cases, those which fail to respond to treatment and suspicious areas.[5] Outpatient biopsy under local anaesthesia is well tolerated and in some UK clinics is routinely used for diagnosis. The classic appearance of lichen sclerosus is of porcelain-white plaques on the vulva, perineum and perianal skin. The texture of 'parchment' or 'cigarette paper' is characteristic and helps to distinguish lichen sclerosus from lichen planus or vitiligo. Areas involved include the labia minora and majora, vestibule, clitoral hood and perineum. Distribution is often described as a 'figure-of-eight' around the perianal skin. Other features include fissuring and erosions which frequently produce soreness and pain, ecchymoses

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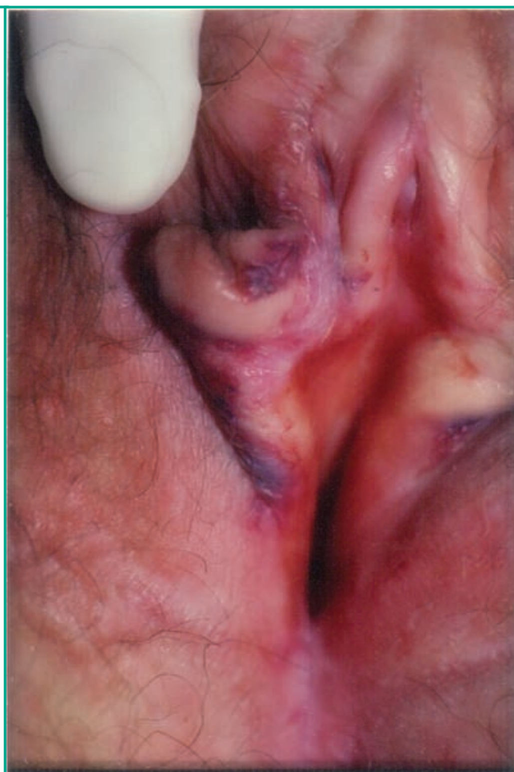

Figure 1
Vulval lichen sclerosus. Image courtesy of Dr R Meyrick-Thomas, Consultant Dermatologist, Salisbury District Hospital, Salisbury, UK

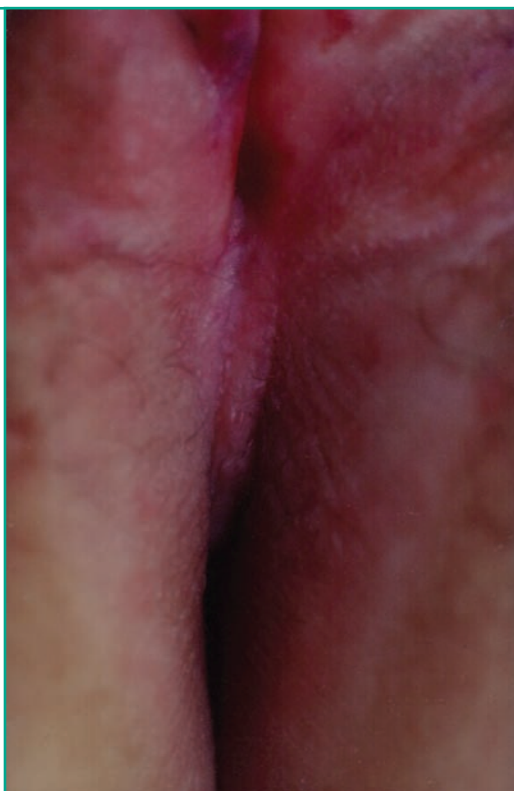

Figure 2
Vulval lichen sclerosus. Image courtesy of Dr R Meyrick-Thomas

and hyperkeratosis, which appears as thickened white areas. The vaginal vault and cervix are spared in lichen sclerosus; in lichen planus there is vaginal involvement in up to 70% of cases.[6] In the presence of fissuring and bruising, clinicians should consider a differential diagnosis of sexual abuse, particularly among vulnerable adults. Vulval Paget disease is a rare differential diagnosis which requires more specialist input in view of the high risk of associated malignancy.

The lifetime risk of squamous cell carcinoma in cases of lichen sclerosus is low and estimates of less than 5% are likely to be higher than actual risk owing to the probable high prevalence of undiagnosed lichen sclerosus.[5,7] In the anogenital area approximately 60% of squamous cell carcinoma presents on a background of lichen sclerosus; however, this is not true elsewhere in the body.

The guidelines used by the British Association of Dermatologists suggest that all women with symptomatic or active lichen sclerosus should ideally be seen at least once by a dermatologist and that women with difficult cases should be seen in a multidisciplinary vulval clinic.[5] Certainly, management is sometimes problematic and should involve clinicians with a special interest in the field; there are many such multidisciplinary clinics within the UK.

Recommended treatment for lichen sclerosus includes the administration of clobetasol propionate (e.g. Dermovate®, GSK, Uxbridge, UK)[4–7] which is an ultrapotent topical steroid; ointment should be used in preference to cream, as outlined previously. In one of the regimens suggested, the ointment is applied once or twice daily for a month, reducing to once daily or alternate days for the next month and to twice weekly for the third month.[5,8] Recent evidence does indicate that there is no advantage in applying topical steroids more than once daily. Vulval care, as described above, is also recommended.

Follow-up of women with lichen sclerosus remains contentious. Follow-up to ensure initial response to and compliance with the treatment initiated seems logical, but long-term follow-up to monitor for malignant change is likely to be beyond the capacity of the NHS. Risk is low but change likely to be rapid, which would necessitate very regular examination. As a minimum, women should be advised to report non-healing ulcers, bleeding, any lumps and any uncontrolled symptoms. Women with disease that is difficult to manage should remain under the care of a specialist.

Topical steroid use

Concerns regarding treatment involving steroids are well known to the public and clinicians inexperienced in the administration of ultrapotent topical steroids may share some of these fears. Such anxieties often result in lack of compliance with treatment, which can be confused for steroid resistance. Women do require consistency in the advice they receive from all the clinicians with whom they come into contact. The pharmaceutical companies do little to help, as the packet insert for their steroid will frequently warn against use of their product in the anogenital area. Steroids can

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cause unsightly atrophy of the skin, but vulval skin is more resistant to this effect. Although specific evidence is lacking, systemic absorption leading to adrenal suppression from vulval steroid treatment is virtually unheard of and many clinics have safely used vulval steroids for decades.

Contact dermatitis

Inflammation of the skin resulting from irritation by an external agent (irritant dermatitis) or allergen (allergic dermatitis) is a very common cause of vulval symptoms. Itching, burning and irritation are all nonspecific symptoms and they can present suddenly or gradually. Contact dermatitis may be a secondary condition and other diagnoses underlying the symptoms should be considered.

Allergic dermatitis is seen less often after the menopause. The history should provide the diagnosis: reaction may be sudden and severe, resulting in vesiculation, erosion and weeping of the skin, with oedema and crusting. Common allergens are nail polish, Vagisil® (Combe International Ltd, Croydon, UK), latex, preservatives and lanolin and, rarely but interestingly, semen has been shown to cause contact dermatitis on occasion. Patch testing can help to identify allergens among women with ongoing symptoms.

Irritant dermatitis in the vulval area is common: as mentioned above, estrogen deficiency reduces the resistance of the vulval skin to irritants. Common irritants include panty liners, detergents and lubricants; a history of excessive vulval washing should be sought. Urinary incontinence is a frequent cause of irritation and can easily be addressed by a gynaecologist. Examination will reveal erythema which is often localised to the area of contact unless the offending product is a liquid, but this sign may be only mild and therefore missed. More severe reactions can lead to oedema, scaling and even erosions. Pruritis can lead to superimposed lichen simplex chronicus, described below.

Treatment begins with identification of the allergen or irritant and removal of all possible offending agents. The use of a soap substitute and emollients can cause burning or stinging initially in severe cases. Low- or midpotency topical steroids may be used for 7–10 days to treat inflammation[4,7] and, in severe cases, oral steroids may be considered. Do not forget to look for superimposed infection requiring antibiotics or antifungals.

Lichen simplex chronicus

(See **Figure 4**.) Lichen simplex chronicus is a secondary condition resulting from the itch-scratch-itch cycle. Often triggered by an underlying vulval dermatosis or other pathology, lichen simplex chronicus is characterised by intractable itching and scratching, particularly during sleep. Examination reveals lichenification with exaggerated skin markings and excoriations. The cycle must be broken and treatment requires an understanding by the woman together with vulval care measures,

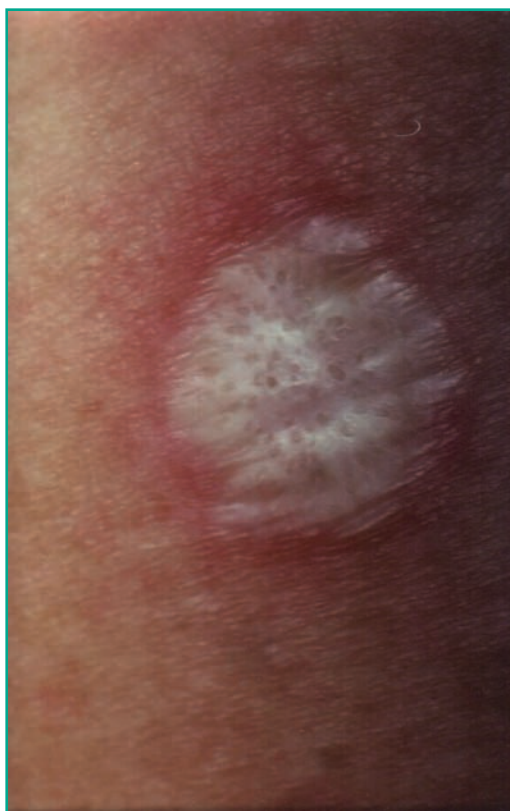

Figure 3
Cutaneous lichen sclerosus. Image courtesy of Dr R Meyrick-Thomas

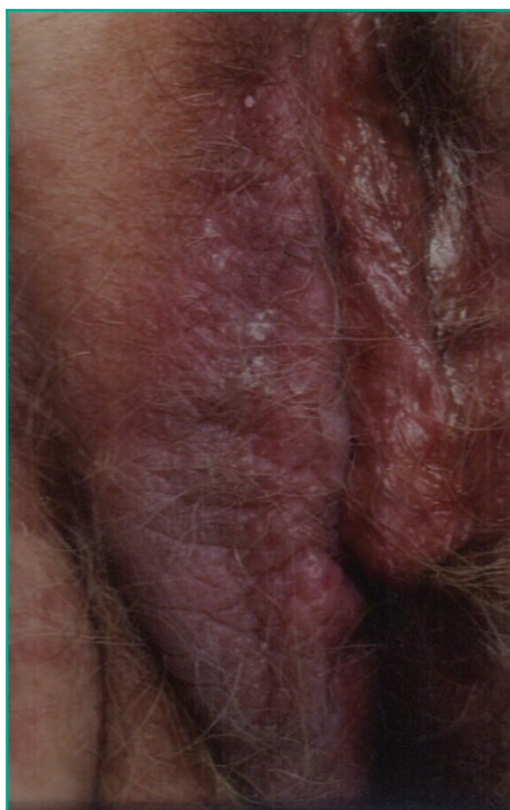

Figure 4
Lichen simplex chronicus. Image courtesy of Dr R Meyrick-Thomas

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sedating antihistamines (e.g. hydroxyzine) at night and mild topical steroids to reduce inflammation. Treatment of the triggering cause is required.

Lichen planus

This is a rare, probably autoimmune, mucocutaneous disorder affecting 1% of all women, most frequently in the mouth. Genital lichen planus presents with intense itching, pain, soreness, dyspareunia and bleeding. Where there is vaginal involvement, a purulent discharge caused by desquamative vaginitis is common.[6]

Vulval lichen planus has a heterogenous presentation, the majority of cases manifesting as erosive lichen planus (**Figure 5**) which affects the mucous membranes and usually involves the vestibule and vagina. On examination, the vulva appears 'red raw' with often nonspecific erosions. Cutaneous lichen planus has a classic lesion, which is well circumscribed, violaceous and flat-topped, found on the trunk and extremities; nonmucous membrane genital lichen planus generally conforms to this description. Wickham striae may be seen on the buccal mucosa of the mouth. These are pathognomonic and may be found elsewhere; on the vulva they appear as white reticular or linear papules. Advanced disease of any subtype may present with adhesions, synechiae, introital narrowing and scarring.

Treatment can be difficult. As with all vulval problems, irritants must be removed and generalised vulval care measures instituted. Potent or ultrapotent topical steroids constitute first-line treatment and suppositories can be used for vaginal disease. Daily application for up to 3 months has been advocated,[6] tapering as required. Vaginal dilators should be used early in vaginal involvement to prevent adhesions and topical local anaesthetic gel can help with discomfort. Surgery is reserved for reversal of severe scarring, particularly for younger or sexually active women.

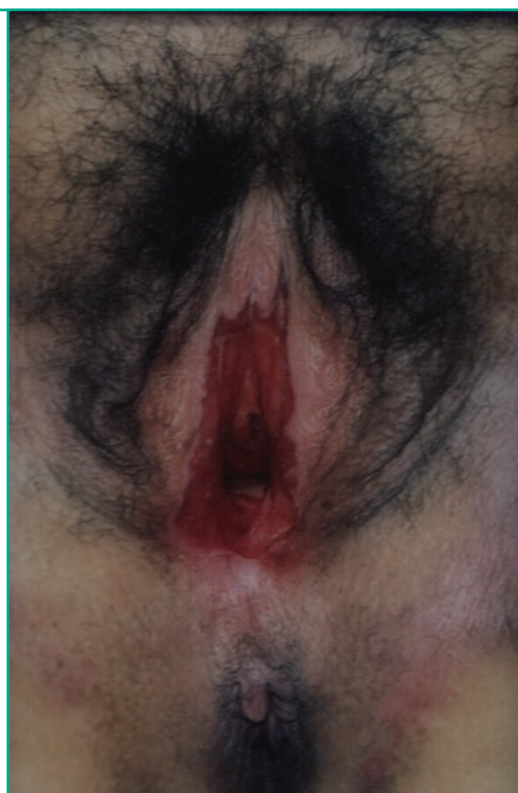

Figure 5
Erosive lichen planus. Image courtesy of Dr R Meyrick-Thomas

Lichen planus is very often misdiagnosed as lichen sclerosus because of similarities in presentation and the presence of white plaques. The waxy 'cigarette paper' textural change of lichen sclerosus is absent in lichen planus, however, and vaginal involvement precludes lichen sclerosus as a diagnosis. Lichen sclerosus and lichen planus are thought to be present simultaneously in some cases, perhaps those with more resistant disease.[5,6] Histology is diagnostic.

Vulvodynia

The ISSVD has recently defined vulvodynia as 'vulval discomfort, most often described as burning pain, occurring in the absence of relevant visible findings or a specific, clinically identifiable, neurologic disorder', and has subclassified it into provoked or unprovoked and generalised or localised. All other terminology, including vestibulitis, is now obsolete. Diagnosis is made clinically by exclusion of other causes. Pain mapping can be performed by demonstrating tenderness to the tip of a cotton swab.

These chronic pain sufferers have frequently seen scores of physicians without reaching a diagnosis and may have followed several treatment regimens providing little or no relief. Treatment, even in the face of now universally accepted classification, is often difficult. Women should be given written information and referred to self-help groups for support. Treatment begins with vulval care and local anaesthesia, which is generally useful in provoked vulvodynia, and moves on to systemic treatment. Therapies known to be helpful in neuropathic pain may work in some cases; agents include amitryptiline and nortryptiline as first-line treatment; gabapentin and pregbalin can be added.[9–11] Cognitive behavioural therapy and biofeedback to the pelvic floor have had limited success.[9,10]

Conclusion

The study of vulval disease is undertaken across three specialties—genitourinary medicine, dermatology and gynaecology. This gives rise to the potential for significant variations in diagnosis and treatment across specialties, which

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has been a problem in past years. More recently, however, the development of a multidisciplinary specialty has allowed expertise from all three fields to combine and offer a first-class service in vulval care. A thorough vulval history and focused examination will provide most of the information needed for diagnosis. Clinicians should not hesitate to refer women to vulval specialists, ideally in multidisciplinary clinics.

Recommended websites

British Society for the Study of Vulval Disease [www.bssvd.org]
International Menopause Society [www.imsociety.org]
International Society for the Study of Vulvovaginal Disease [www.issvd.org]
Vulval Pain Society [www.vulvalpainsociety.org]
Vulval Health Awareness Campaign [www.vhac.org]

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