Vulval skin disease: clinical features, assessment and management


Summary
This article outlines the issues involved in assessing and managing patients who present with a vulval skin condition. It describes the anatomy of the vulval area, many of the skin conditions that nurses may encounter in their practice and potential treatment options for these conditions. The importance of accurate history-taking is emphasised and described, and appropriate referral to a specialist is also discussed.

Authors
Sandra Lawton is nurse consultant dermatology; Sheelagh Littlewood is consultant dermatologist, Queen's Medical Centre, Nottingham University Hospitals NHS Trust, Nottingham. Email: sandra.lawton@nuh.nhs.uk

Keywords
Dermatology; Sexual health; Skin and skin disorders; Vulval health

These keywords are based on the subject headings from the British Nursing Index. This article has been subject to double-blind review. For related articles and author guidelines visit our online archive at www.nursing-standard.co.uk and search using the keywords.

Aims and intended learning outcomes
This article aims to increase nurses' knowledge of caring for patients with a skin condition affecting the vulval area. It also aims to provide practical solutions to the everyday skin care problems often experienced by these patients. After reading this article you should be able to:

- Outline the normal vulval anatomy.
- Undertake a skin/vulval history.
- Identify common skin conditions affecting the vulva.

Introduction
The prevalence of vulval skin disease is likely to be underestimated. Exact figures are not known because many women delay seeking medical advice due to embarrassment or concerns about a possible infectious cause for their condition. This delay is often compounded when women self-medicate with over the counter preparations which include medications to treat pruritus and thrush. As part of their work nurses will meet patients presenting with vulval skin problems, therefore, this article covers the important issues that should be considered when caring for these patients.

Vulval anatomy
The vulva is made up of the structures that form the female external genitalia: mons pubis, labia majora and minora, clitoris, vestibule, Bartholin's glands and the perineal body (Figure 1).

Labia majora
The labia majora form two thick folds of skin lateral to the vaginal orifice. They join anteriorly to form the mons pubis that, in turn, overlies the pubic bone. They contain numerous hair follicles, sweat and sebaceous glands. Posteriorly they form the perineal skin.
The vulva

Labia minora: The labia minora lie just inside the labia majora. They do not have hair but the outer areas contain sebaceous glands, which can be seen as small yellow papules. There is considerable variation in the size of the labia between women and they are often asymmetric, sometimes markedly so. Anteriorly they fuse around the clitoris and posteriorly form a lip of skin called the fourchette. This area is particularly vulnerable to trauma, for example during intercourse or childbirth, and may easily split or fissure.

Clitoris: The clitoris is the female equivalent of the male penis. It becomes engorged and highly sensitive during intercourse.

Vestibule: The vestibule is the oval opening between the labia and is where the vulva meets with the vagina. It is an extremely sensitive area and contains the Bartholin’s glands, which produce vaginal lubrication, the urethra and a number of the small minor vestibular glands that also produce vaginal discharge.

Perineal body: The perineal body is the fibromuscular area formed by the superficial muscles of the perineal pouch. It provides support for the vagina and separates the vulva from the anal canal. It can be traumatised during childbirth.

It should be remembered that many women have little understanding of their vulval anatomy and rarely refer to anatomical structures in medical terms. Care must be taken to ensure that the patient and nurse are talking about the same thing.

History-taking

Although the vulva is an area subjected to a particular microclimate – warmth, moisture, friction and often overly vigorous cleansing – which differs from most other cutaneous sites, the principles of history-taking do not differ from those of skin disease elsewhere.

Signs and symptoms: The main symptoms and their duration should be discussed. These may include: pruritus, burning, pain, soreness or concerns about changes in appearance, and a discharge. The relationship to the menstrual cycle, micturition and intercourse should be questioned, specifically as patients may feel embarrassed about these details and not volunteer this information. Determine when the symptoms are at their worst, and if anything improves or worsens them.

Medical history: Enquire about any skin disease elsewhere on the patient and a personal or family history of atopy, for example, eczema, asthma or hay fever. Also enquire about whether the patient has any other illnesses, such as diabetes mellitus, malignancy, or an autoimmune disease such as thyroid disease and pernicious anaemia, which may be relevant.

Medication history: It is important to obtain a medication history. This may be difficult to ascertain because many women will have used multiple medications, prescribed and over the counter. They will not always consider these relevant and may not be forthcoming. Ask about hygiene practices, frequency of washing and what preparations are used.

Sexual history: A sexual history is an important element of many vulval diseases and should be sensitively explored. However, nurses may be reluctant to address these issues and patients are often reluctant to disclose any problems.

Examination

Examination should include inspection of the whole vulval and peri-anal area with good lighting.
Skin changes that may look trivial can produce severe symptoms, for example, splits and fissures, and should not be dismissed. Important clues can be gained from examination of other skin sites, including the mouth so that lichen planus is not missed (Figure 2).

**Diagnostics** Further investigations such as swabs for microbiology and skin biopsy may be required. A skin biopsy will usually require specialist referral. Many vulval diseases look different from the way they appear at other sites, can be non-specific and a biopsy is often helpful in these circumstances. Other investigations may be indicated depending on the history and clinical examination, and these may include samples for mycology (fungal), haematological screens and patch testing.

### Common skin conditions

Skin conditions affecting the vulval area can be classified into four groups:

- **Inflammatory disorders**: dermatitis (eczema), psoriasis, lichen planus and lichen sclerosus.
- **Infections** (fungal, bacterial and viral) and infestations.
- **Tumours** (benign and malignant).
- **Blistering disorders** (pemphigus and pemphigoid).

#### Inflammatory disorders

Eczematous rashes in the vulva are common (Figure 3).

**Atopic eczema** This can affect the genital area acutely or chronically when, as a result of chronic scratching and rubbing, thickened scaly plaques develop with overlying excoriation and fissuring. The appearance is termed lichen simplex. It can be unilateral or bilateral, and the labia majora are the most frequently affected sites, although the labia minora, vestibule, mons pubis and inner thighs can all be involved.

**Contact dermatitis** This condition can be both allergic and irritant. Allergic contact dermatitis can be difficult to distinguish from irritant dermatitis and they can occur together (Marren et al 1992, Bauer et al 2000). Many patients self-medicate with a surprising number of preparations and aggressively over-cleanse the area. This produces an irritant reaction with varying degrees of redness, swelling and scaling. In chronic cases lichenification (thickening) and excoriation (scratch marks), together with pigmented abnormalities, become prominent. Secondary infection is not uncommon.

Common allergens in allergic contact dermatitis include fragrances, preservatives, topical medications, rubber, nail varnish and nickel. The diagnosis is confirmed by patch testing.

**Psoriasis** This can affect the vulval area but loses many of the characteristic features, such as silvery scaling, seen at other body sites. It presents as a glazed erythema which can affect the whole of the vulval area or mainly intertriginous folds such as flexures and genitals. Evidence for psoriasis elsewhere on the body should be sought.

**Lichen planus** is an inflammatory condition that classically produces widespread itchy flat-topped papules. Although the vulva can be affected in this way it also produces mucosal disease resulting in glazed erythema, which bleeds easily and erodes, hence the term erosive lichen planus. The appearances can be non-specific and difficult to diagnose without biopsy. It can also involve the buccal mucosa, producing similar changes in the mouth (Figure 2) and in the vagina (Figure 4) – the vulvo-vaginal-gingival syndrome (Pelisse 1989). It causes extreme soreness and pain and is difficult to treat.

**Lichen sclerosus** This is a chronic inflammatory condition, believed to be autoimmune in nature, which preferentially affects the vulval area.
Learning Zone Dermatology Focus

(Figures 5a and 5b). It usually produces itching and soreness. On examination the affected area is white and atrophic as demonstrated by wrinkling of the skin. There may also be purpura (bleeding into tissues), erosions, fissuring, hyperkeratosis (warty thickening) and hyperpigmentation (increased pigmentation). Atrophy results in loss of the labia, burying of the clitoris and adhesions occur. The vaginal opening can be narrowed leading to difficulties with intercourse and perineal involvement leads to a figure of eight shape around the anus. There is a small risk of developing malignancy (Leibowitch et al 1990, Thomas et al 1996).

Infections Although there are many common infections involving the vulval area they tend to be over diagnosed. Many, if not most, women with lichen sclerosus will have been diagnosed and treated for thrush at some time before the correct diagnosis is made. Infections occur frequently in addition to the underlying disease and it should be remembered that in vulval disease there is often more than one process involved. Candida This produces inflammatory vulvitis, with itching and discharge which is, typically, thick and yellow/white in colour. It is most common in the week before menstruation. On examination the vulva and vestibule are inflamed, red and oedematous. Diagnosis should be confirmed on culture from a swab.

Trichomonas vaginalis This is a sexually transmitted disease and infection ranges from an asymptomatic carrier state to severe acute inflammation. Patients experience itching, soreness, dyspareunia and a malodorous discharge. Signs can be absent or patients may have a diffuse erythema and swelling with discharge. Swabs should be taken to confirm diagnosis.

Herpes Genital herpes can be caused by either herpes simplex type 1 or 2 virus (HSV). They both persist indefinitely in neuronal ganglia. Primary genital herpes is infection in an individual without previous infection. It may pass unnoticed or present after an incubation period of two to 12 days as multiple, painful blisters that soon rupture to form shallow ulcers. There is often dysuria or even urinary retention. Recurrent attacks become less severe and frequent over time. Asymptomatic or unrecognized herpes reactivation is usual and it is estimated that 1 per cent of HSV-2 seropositive subjects are shedding virus on any given day regardless of any history of genital herpes (Wald et al 2000).

Tumours A number of benign and malignant tumours can affect the vulva, including malignant melanoma and squamous cell carcinoma. The latter presents as either a raised, warty nodule or ulcer and can complicate lichen planus and lichen sclerosus. In younger women, however, it can develop from areas of dysplasia termed vulval intraepithelial neoplasia or VIN (Figure 6).

VIN is divided into types 1, 2 and 3 depending on the degree of epidermal involvement. Little is known about the natural history of VIN 1 and 2 but they are often considered not to be of great significance. Most of the work relates to full thickness dysplasia or VIN 3 (Friedrich 1981). These can vary from skin-coloured red or white plaques to hyperpigmented lesions that are often multiple and can be eroded. A biopsy should be taken from any persisting non-healing area on the vulva. There is an association between VIN and human papillomavirus type 16 in particular (Bauer et al 2000). The incidence of VIN has increased markedly over the past 25 years and is strongly associated with sexually transmitted infections, smoking (Wilkinson et al 1998) and cervical intraepithelial neoplasia (CIN) (Ferenczy 1992).

Blistering disorders The autoimmune bullous disorders, pemphigoid, cicatricial pemphigoid and pemphigus can affect the vulva. These are not common, but cicatricial pemphigoid affects the genital area more frequently than the others. Intact blisters are seldom seen and in the absence of a history of blistering elsewhere the diagnosis can be difficult to make. The presentation is with painful erosions and requires biopsy and immunofluorescence to confirm the diagnosis. Immunofluorescence is the labelling of antibodies or antigens with fluorescent dyes and is the technique used for the diagnosis of blistering conditions. These disorders result in marked adhesions and scarring.
Vulval pain

Vulvodynia is the term used to describe vulval discomfort or pain, characterised by burning, stinging, irritation or rawness of the vulval area and may be the first presenting symptom for many women. It can be mild or severe, occasional or constant and may make sexual intercourse difficult or impossible. Everyday functions of passing urine, opening bowels and using sanitary products may all cause pain. For many patients a cause may be found for these presenting symptoms, such as an infection or skin condition. However, for many patients there will be nothing to see or treat and they may be given the diagnosis of localised vulvodynia or generalised vulvodynia, although there may be some overlap between the two. The pain can be either spontaneous or provoked by touch (International Society for the Study of Vulvovaginal Disease 2005).

Management

Living with a vulval skin condition can affect patients in a variety of ways and the symptoms of itch, soreness, pain and discomfort can be distressing. These all have an impact on function on a day-to-day basis, such as passing urine, opening bowels, sexual function and hygiene needs. Nurses can make a real difference to patients by providing practical and realistic advice for patients and their carers, as not all patients are able to care for their vulval condition independently. There are some basic principles of care which apply to all patients.

General hygiene

Vulval skin is sensitive and can react to both irritants and potential allergens (Box 1). Patients need to know how to use their treatment effectively and care for their general hygiene needs at the same time. Soaps and other products that may irritate the skin should be avoided and a simple emollient or soap substitute should be used for washing.

Patients should also be discouraged from excessive washing as this will dry and irritate the skin further. After washing the skin, the area should be patted dry. It should not be rubbed vigorously as this will cause further irritation and scratching. Some patients may use hair dryers if their skin is very sensitive to touch but extreme care should be taken. After drying the skin an emollient should be applied.

Emollients

These are important moisturising agents that play an integral part in the treatment of skin disorders. They act by producing an occlusive film on the skin and prevent water loss. Many emollients can be used as a soap substitute and moisturiser. There are many available and patient involvement in the choice of preparation will ensure effective use. Soap substitutes can be massaged gently onto the skin and then rinsed off, or applied with a soft cloth or sponge and gently rubbed into the skin (Pringle and Penzer 2002).

Emollients are best applied immediately after the cleansing routine when the skin has a high water content (Holden et al 2002). Ideally, emollients should be used at least twice daily, but
learning zone dermatology focus

Emollients should be applied lightly. Aim for a glisten on the skin, not a thick, heavy application that damages clothing, furniture, and often makes the patient hot and itchy. When used for vulval conditions patients may need to use them after going to the toilet and may apply their emollient to the toilet tissue to cleanse the skin if very sensitive to touch. If patients are using nappies, sanitary protection and continence pads the more greasy emollients may affect the absorption of these products (Zehrer et al. 2005). Care should also be taken if using emollients and condoms as the oils may weaken the rubber and the condom may break (NHS Direct 2006).

Emollients should be applied more frequently, depending on the severity of the skin condition, dryness of the skin and the type of product used. Emollients require precise application. They are particularly useful and an alternative way to monitor steroid use is to give guidance on quantities expected to be used over a certain time scale, for example, 30g should last one month. It is a useful way to monitor how much patients may be using or under using.

One question is whether it is best to apply other topical therapies before or after emollients. Best practice generally advises the use of emollients after bathing – allowing at least 30 minutes to one hour between topical medications, which prevents dilution and the unknown effects on the stability and absorption of the medication (Highet 2002). Topical steroids require precise application and this can be problematic for patients with vulval skin conditions: using diagrams and a mirror may help.

Some patients may not be able to do this independently and may require help from a supportive family member and this can be embarrassing. Older patients, with poor mobility and vision, will require regular nursing support from community nurses and this requires a long-term commitment. It is important to recognise that many topical therapies used for these conditions are potent medications that require supervision by a nurse competent in using the therapies, with an understanding of their effects, the disease process and response to therapies, and the recognition of side effects and potential complications. Skin disease requires individualised care plans which, if used effectively, can make a huge difference to the quality of life for the patient.

Percutaneous absorption This refers to the absorption of topical medications through the epidermal barrier into the underlying tissues and structures, with transfer to the systemic circulation. The stratum corneum regulates the amount and rate of percutaneous absorption (Rudy and Parham-Vetter 2003). The characteristics of the skin are an essential consideration for percutaneous absorption: the features of normal skin barrier, changes in skin barrier function and vascular changes have a critical role in absorption.

Skin hydration and environmental humidity are important factors affecting percutaneous absorption. In healthy skin with normal hydration, medicaments can only penetrate the stratum corneum by passing through the right, relatively dry, lipid barrier between cells. When skin hydration is increased or the normal skin barrier is impaired, as a result of skin disease, excoriations, erosions, fissuring or prematurity, percutaneous absorption will be enhanced (Rudy and Parham-Vetter 2003).

Site of application Mucous membranes and areas with thinner skin, such as the eyelids, face and genital area, have higher absorption rates. Areas with thicker skin, such as the palms and soles, have poorer absorption rates.

Vehicle The use of an ointment-based product, rather than a cream or lotion, will also increase the pharmacological effect by providing an occlusive barrier and preventing evaporation of
water from the stratum corneum. It is important to be aware of the vehicle (the base to which the active ingredient is added, which could be a lotion, cream, or ointment) and the active ingredient used in topical medications, because this will influence the therapeutic effect and the potential for local and systemic side effects. For vulval skin conditions ointments are preferable as they provide an occlusive effect which helps protect from potential irritants and they contain fewer preservatives that may cause a contact allergic dermatitis (Box 1).

Occlusion Absorption of topical medications will be enhanced in intertriginous areas of skin, such as flexures and genitals, and in skin folds, because of increased skin hydration. The use of topical medications under occlusion, such as nappies and continence products, will also have an effect by increasing the skin temperature and hydration (Lawton 2004).

Referral to specialist teams Many patients presenting with a vulval skin problem can be managed initially in primary care by the GP or nurse. If management then becomes complex, there is diagnostic doubt, treatments have failed, there is a need for further investigations such as patch testing and skin biopsy, or there is the possibility that systemic or second-line therapies may be indicated, these patients should be referred.

There are an increasing number of specialist vulval clinics available. Many will have a dedicated team and links with dermatology, gynaecology, genitourinary teams, pathology and pain services.

References


Conclusion

This article has provided an overview of vulval skin conditions and the problems associated with assessment and management. Nurses in a variety of healthcare settings have an important role to play in the management of these conditions, and in providing support and advice for patients. To ensure effective care, nurses should understand the principles of assessment, the common causes of vulval skin conditions and treatments and know when and where to refer patients with more complex needs.

Many patients can manage their condition if given appropriate support to do so. They should be given a detailed explanation of their condition, the treatment options, and the long-term implications for themselves and their partners. This can be reinforced by giving clear and accurate written information and details of appropriate patient groups and/or web sites. NS