

## ***Skin diseases affecting the vulva***

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### **Abstract**

Vulval skin disease is common in gynaecological practice. This article aims to enhance clinical skills in patient assessment, vulval examination and treatment of common benign vulval skin disease. Basic treatments are often of benefit to the patient (e.g. use of emollients and topical steroids), but many patients have complex disease and can present with more than one condition so careful assessment and individualised management is essential. Understanding of when to refer onwards to a vulval specialist service is important to optimize clinical outcomes. Clinical outcomes to consider for all patients with vulval skin disease should include 1) A reduction in symptoms (eg less itch, fewer flare-ups), 2) An improvement in function (eg sexual function, mobility), 3) Increased confidence in self-management (eg management of flare-ups and self-examination).

### **Key words**

Vulva, lichen sclerosus, lichen planus, vulval eczema (dermatitis), psoriasis, vulvovaginal candidiasis, lichen simplex,

### **Main text**

#### ***Assessment of the patient***

##### **History taking**

Most vulval skin diseases can be diagnosed on the basis of a history and clinical examination. Investing time in this process is important as some patients have already experienced delays in management or ineffective treatments. Discussing vulval skin problems is a sensitive subject matter which requires a relaxed and sympathetic environment for the patient to express their concerns. This should be recognized by the clinician and will improve the overall patient experience by allowing a good rapport to be established early on.

An accurate description of symptoms and assessment of function are paramount to determine the impact of the condition on the patient. Table 1 outlines some key questions to ask in the history and reasoning for this. A psychosexual history should be explored if appropriate as secondary psychosexual problems such as avoidance, phobia of touch, loss of libido and vaginismus may be identified and need addressing as a key aspect of the treatment plan. Clinicians may express concern at discussing sexual function with patients who have a vulval problem, but patients

often welcome discussing this important aspect of the history.

Table 1 – vulval history taking points

Question	Reasoning
What are the key symptoms and how severe are they?	Important to be clear on the initial symptom. Itch can suggest skin disease or infection. Pain can be secondary to itching from skin damage through trauma. Vaginal discharge may suggest infection.
How long has the woman been experiencing symptoms?	Acute symptoms may indicate infections such vulvovaginal thrush or contact dermatitis. Chronic symptoms may be due to lichen sclerosus or lichen planus.
What is the impact on the patient's function? ('How do the symptoms affect you?' or 'What do you miss as a result of the problem?')	Improvement in function (including sex) is an important clinical outcome. Functional impairment should be documented at every consultation
What treatments have been tried before (including over the counter agents)?	The history should explore failed treatments e.g. topical steroid frequency and amount as under usage with these treatments is common due to steroid phobia or a lack of understanding by the patient. Inappropriate topical treatments can exacerbate symptoms and potentially cause an irritant reaction.
How is the patient cleaning the vulval area?	Over-washing may lead to skin damage and further irritation.
Are there any possible contacts with irritants e.g. soaps, shampoos, urine, and scented vaginal wipes?	These are potential irritants and can damage the skin potentially causing inflammation. Urine and scented vaginal wipes are potent skin irritants.
Are symptoms stress related?	In lichen simplex, itching is classically worse at times of stress. Many inflammatory skin conditions may flare during stressful life events.
Is there any systemic illness?	For example, diabetes, renal failure, anaemia (these may all be a cause of itch), or autoimmune conditions (higher chance of systemic autoimmunity in lichen sclerosus or erosive lichen planus). A family history of autoimmunity should also be asked..
Are there any other skin conditions present?	Skin disease at other skin sites may provide clues to the vulval diagnosis. For example, eczema or psoriasis. These may be very obvious, however signs may be subtle, for example psoriasis is sometimes hidden as cracking behind the ears, a scaly scalp or umbilical erythema)

### **Vulval examination**

Vulval examination needs to be carried out with tact and awareness of the patient's possible discomfort. It is sensible to have a chaperone present, especially if the examining doctor is male. Examination should be thorough and methodical to include all areas of the vulva, perineum and perianal area. The patient should initially be in the dorsal position for vulval and perineal examination and subsequently turned to the left lateral position to examine the perianal area. Good lighting is essential to view these areas adequately. It is not necessary for the patient to be placed in the lithotomy position.

The normal vulva in an adult woman includes the mons pubis, inguinal folds, outer and inner labia (majora and minora), clitoris (body and hood), perineum, vestibule and anus (Figure 1). Hart's line is the junction between the vestibule and the inner labia and marks change in epithelium type from mucosal type to stratified squamous. Digital and speculum examinations of the vagina may be appropriate to look for erosions, mucosal thickening, adhesions, and scarring (1). Vulval pathology may be a manifestation of a general skin condition and therefore a complete examination including the umbilicus, natal cleft, oral cavity, eyes and mouth should be performed if relevant. This allows a more complete assessment of disease extent and diagnosis especially for diseases that are not solely restricted to the vulval region such as psoriasis, eczema, lichen sclerosus and erosive lichen planus. It is important to note that the classical appearances of skin conditions may not apply to the vulval area as it is a covered, moist environment. For example, psoriasis on normal skin presents with well demarcated, scaly erythematous plaques, but vulval psoriatic plaques are smooth, glossy and often salmon-pink in colour often with no scale.

Examination may show changes in colour and texture of vulval skin or mucosa:

- '*Erythema*' refers to reddening of the skin, which may be poorly demarcated, as in eczema (Fig 2 demonstrates poorly defined erythema in the context of contact dermatitis) or well demarcated, as in psoriasis (Fig 3). The presence of erythema usually indicates an underlying inflammatory process. If present in association with pain, infection should be considered.
- '*Whitening*' of the skin may occur in the presence of a normal epidermis such as in vitiligo, or in conjunction with epidermal change such as lichen sclerosus (Figure 5).
- '*Lichenification*' is the term used to describe a leathery thickening of the skin with increased skin markings which occurs in response to persistent rubbing. The vulval region is often moist and scale is a less reliable sign than on other areas of the skin. It is most reliable on the mons pubis where scale may be a manifestation of psoriasis. On other sites such as the natal cleft, scale and lichenification may result in whiteness and splitting of the skin. This can make common conditions more difficult to diagnose (Figure 6).

The terms used to describe vulval lesions are described in table 2.

Table 2: Terminology of lesions that may be seen in the vulval area

Lesion terminology	Description	Example
<b>Fissure</b>	A thin 'hairline' crack in the skin surface due to excessive dryness	Psoriasis and lichen sclerosis
<b>Excoriation</b>	Scratch mark, may be single or multiple	May be seen in any itchy skin condition e.g. atopic eczema, lichen sclerosis
<b>Erosion</b>	A shallow denuded area due to loss of the epidermis (surface layer of skin)	Erosive lichen planus
<b>Ulcer</b>	Full thickness loss of the epidermis (top layer of skin) +/- dermis	Aphthous ulceration
<b>Macule</b>	Flat area of colour change	Vulval melanosis Ecchymosis (subcutaneous purpura) seen in lichen sclerosis
<b>Nodule</b>	Large palpable lesion greater than 0.5 cm in diameter	Squamous cell carcinoma, Scabies
<b>Papule</b>	Small palpable lesion less than 0.5cm in diameter	Genital warts Molluscum contagiosum Seborrheic keratosis
<b>Plaque</b>	A palpable flat lesion greater than 0.5 cm diameter. It may be elevated or may be a thickened area without being visibly raised above the skin surface	Vulval Intraepithelial Neoplasia Squamous cell carcinoma Large seborrheic keratosis
<b>Vesicle</b>	Small fluid filled blister less than 0.5cm diameter	Bullous pemphigoid
<b>Lichenification</b>	An accentuation of skin markings commonly associated with thickening of epidermis usually caused by scratching or rubbing	Lichen simplex

## Investigations

### *Diagnostic vulval biopsy*

A 4mm Keyes punch biopsy is adequate and should ideally be carried out under local anaesthetic at the initial visit if indicated. It can provide adequate tissue for histology but is not adequate if immunofluorescence is also required to exclude immunobullous disease when two biopsies may be needed. It is important to avoid crushing the epithelium when taking the biopsy as this impacts on histology interpretation. Inflammatory vulval lesions often have indistinct inflammatory pathology and a diagnosis should always be a clinic pathological correlation. A vulval biopsy is usually indicated for 1), asymmetrical pigmented lesions, 2) persistently eroded areas, 3) indurated and suspicious ulcerated areas, 4) when there is poor response to treatment following the initial diagnosis. The site selected for biopsy should be tissue-representative of the lesion or

area of abnormality. This is usually at the edge of the lesion and should also include some normal tissue. The most central area may be inflamed or necrotic, which may give minimal tissue diagnosis because of the inflammation present.

An excisional biopsy where the lesion is completely removed can be problematic if the diagnosis is subsequently found to be cancer or VIN in that re-excision is often required. This can lead to further skin loss that might compromise function. We would recommend a diagnostic biopsy only for initial assessment. If a cancer is suspected then taking a 4mm Keyes punch biopsy is acceptable or referral on to a gynaecological cancer team. Multiple mapping biopsies are indicated in cases of suspected multifocal disease to make a diagnosis and exclude invasion. This usually requires a general anaesthetic.

Histopathology biopsy reports may confirm a diagnosis and also exclude malignancy. In some patients a clinical suspicion of a disease process can be supported (but not confirmed) by the biopsy report so it is important to correlate the report in the context of the patient's clinical presentation. If there is a discrepancy between the clinical presentation and the report then the report should be reviewed with the pathologist. An example is the reporting of 'inflammation' which may be incorrectly interpreted as dermatitis and lead to the prescription of topical steroids. 'Inflammation' may be over reported in normal skin and is not uncommon in other inflammatory skin conditions eg early lichen sclerosis.

#### *Vaginal and vulval swabs*

Infection with candidiasis is a common cause for loss of symptom control in inflammatory dermatoses and may be a reason why lichen sclerosis appears initially well controlled with potent steroids and then flares. Minor degrees of skin trauma from scratching can produce infection. Occasionally, genital herpes can be a cause of vulval symptoms and a viral culture swab may be necessary. Genital herpes testing may not be possible in the standard gynaecology clinic so referral onto genito-urinary medicine services may be appropriate.

#### *Patch testing*

Patch testing is a measure of delayed type (type IV) hypersensitivity reaction. It is carried out under the supervision of a dermatologist and is indicated when allergic contact dermatitis is considered. During the process, potential allergens are placed on aluminium discs and applied to the patient's back. These are removed and read at 48 hours, and then again at 72 hours after application to examine for a reaction. Allergic contact dermatitis is difficult to diagnose clinically and clinicians need to be aware of this condition when prescribing topical treatments such as steroids. Common allergens in the vulval area include topical steroids, topical anaesthetics, fragrances, sodium lauryl sulphate and topical neomycin (2). Sensitisation leading to dermatitis can occur at any time and should be considered if symptoms initially well controlled with topical therapies subsequently flare. Patients should be initially referred to a vulval service or a dermatologist for an opinion if allergic contact dermatitis is suspected. Clinical history is very important to determine potential sensitising agents which can then be applied to the skin during the patch testing process.

#### *The multidisciplinary team*

As many vulval problems are chronic, rare and difficult a multidisciplinary input may be required. Service provision can vary but most hospitals in

the UK provide a local vulval clinic providing expert help. Members of vulval service might include dermatology, genito-urinary medicine, physiotherapy, pain management, psychosexual therapy, pathology and urogynaecology.

### **Specific vulval skin diseases**

A systematic approach is required when managing patients with vulval symptoms. It is important to understand that vulval itch (sometimes termed 'pruritus vulvae') is a common presenting complaint. It is not in itself a diagnosis, but a symptom indicating an underlying cause. Itch may be the presenting symptom of many vulval skin disorders. It may also be related to an underlying systemic illness as part of a more generalised complaint of itch. Common dermatoses in the anogenital area can affect any female and include dermatitis (irritant, allergic contact or atopic), psoriasis and lichen sclerosis. Other important local causes of anogenital itch include infections (candidiasis, viral warts), urinary or faecal incontinence, lichen simplex chronicus, squamous cell carcinoma and oestrogen deficiency. The algorithm outlined in Fig 4 is useful when assessing patients who present with vulval itch.

Table 3 gives a summary of the clinical features of specific skin diseases, diagnosis and treatment and gives a framework of making a diagnosis, initial treatment and ongoing referral teams. With some conditions eg psoriasis, dermatologists will need to take a lead clinician role in management. We have included the important value of a general practitioner in management as they are usually responsible for the ongoing management of patients in the community.

Table 3 - summary of the clinical features and treatment of specific skin diseases.

Diagnosis	Clinical appearance	Diagnosis	Primary treatment	Who should manage following a diagnosis?
Lichen sclerosus (auto-immune, chronic, inflammatory skin condition).	Porcelain white papules and plaques Ecchymoses (subcutaneous purpura) Erosions (loss of epidermis) Fissures Lichenification (see Fig 5) There can be a 'figure of eight' appearance to the disease. Loss of normal anatomy, labial fusion and adhesions are late signs of disease.	Clinically if confident or a vulval biopsy. Consider biopsy(s) if there are indurated or suspicious areas	Superpotent topical steroid and emollients (see Topical steroids and their use in the treatment of vulval skin conditions) There is a small risk of cancer (less than 5% risk) so patients should be encouraged to self exam on a regular (suggested monthly) basis. Posterior fourchette fissuring may require digital massage of the steroid into the fissure, vaginal dilators, lubricants and possible surgery (Z-plasty).	Gynaecologist, dermatologist or GP. Refer to vulval service for treatment resistant cases, complications of treatment and when associated with VIN.

Lichen planus (autoimmune chronic inflammatory condition)	<p>Two types can affect the vulva</p> <p><i>'Classical'</i> lichen planus - violaceous, well demarcated plaques with overlying lacy white lines which usually affect the labia majora and surrounding skin</p> <p><i>Erosive</i> lichen planus - 'glazed' erythema or erosions symmetrically distributed at vaginal introitus. White slightly raised edge to lesions. Lacy white lines (Wickham's striae) in surrounding skin. (see Fig 6). May have loss of anatomy. Pain is usually a presenting feature and these patients can also have significant vaginal stenosis</p>	Clinical assessment and biopsy from the edge of an erosion. Lichen planus may be seen in the mouth or normal skin	Superpotent topical steroid and emollients (see Topical steroids and their use in the treatment of vulval skin conditions)	Dermatologist or gynaecologist. For <i>classical</i> type refer to vulval service for treatment resistant cases and when associated with VIN. <i>Erosive lichen planus is difficult to treat so refer early to a vulval service.</i>
Atopic eczema (may be termed Atopic dermatitis)	Symmetrically inflamed, erythematous, weepy skin. No loss of anatomy. May be satellite lesions and poorly defined edges. Lichenification may be present Figure 2 shows the appearance of vulval eczema that might be due to either atopic eczema or contact dermatitis	Clinical history and examination to include other skin sites for other signs of eczema especially the antecubital and popliteal fossae. The skin is often noticeably dry.	Moderate (e.g clobetasone butyrate 0.05%) or potent (e.g. Mometasone furoate 0.1%) topical steroid plus emollients to gain control of inflammation.	Dermatologist or GP
Contact dermatitis	<p>Two types can affect the vulva</p> <p><i>Irritant form</i> (triggered by irritants eg soap, urine) Poorly defined erythema present where irritant has been applied</p> <p><i>Allergic form</i> – Erythema extends outside of area where allergen has been applied</p> <p>Figure 2 shows the appearance of vulval eczema that might be due to either atopic eczema or contact dermatitis</p>	Clinical history and examination. Patch testing if allergic contact dermatitis suspected	Moderate (e.g clobetasone butyrate 0.05%) or potent (e.g. Mometasone furoate 0.1%) topical steroid plus emollients to gain control of inflammation. Strict avoidance of irritants/allergens.	Dermatologist and GP

Seborrhoeic eczema	Glazed skin in the intralabial sulci.	Clinical examination of other sites – scalp, eyebrows, nasolabial folds for erythema and fine scaling	Moderate (e.g clobetasone butyrate 0.05%) or potent (e.g. Mometasone furoate 0.1%) topical steroid plus emollients to gain control of inflammation.	Dermatologist and GP
Psoriasis	Classically, well demarcated, scaly erythematous plaques, but vulval psoriatic plaques are smooth, glossy and often salmon-pink in colour. Often no scale in vulval creases but surrounding skin may have typical scaly lesions of psoriasis. There is no scarring or loss of anatomy (Fig 3).	Clinical assessment to include examination of 'hidden sites' for other signs of psoriasis eg . knees, elbows, umbilicus, scalp, ears, lower back and nails Biopsy if unsure.	Moderate potency topical steroid plus emollients as recommended by NICE guidance. As the skin folds can become particularly macerated, there is a chance of secondary bacterial or fungal infection. A combination topical preparation (e.g clobetasone butyrate 0.05%/oxytetracycline 3%/nystatin) may be helpful.	Dermatologist
Lichen simplex	Lichenification of the skin with erosions from chronic scratching. Usually no loss of anatomy but can give thick 'leathery' skin. This is often superimposed on other itchy skin disorders such as eczema and lichen sclerosis (figure 6)	Clinical history and examination.	Superpotent topical steroid and emollient. Once control of symptoms is achieved, moderate potency topical steroid may be required intermittently. Secondary infection with candida or bacteria is common and may need treatment.	Dermatologist and GP.

## **Management of vulval skin conditions**

### **General principles**

Initial principles of management are the same for all vulval skin conditions and a holistic approach is required. Good education, support and counselling are needed with extra time given to address the disease process, discussing general vulval care measures and managing expectations. It is useful to provide information leaflets, direct patients to relevant patient-oriented websites and write down instructions for applying topical agents. (see 'Additional resources' for sources of patient information). The use of a mirror or model in the clinic setting is helpful to show patients where to apply their topical treatments.

### **Correct barrier function**

Most vulval skin conditions are characterised by skin or mucosal barrier breakdown as well as underlying inflammation. Correction of the epidermal barrier is important in helping to reduce inflammation. For washing, soap and other routine cleaning agents (e.g. wipes) should be avoided, as they are likely to act as irritants or allergens. Irritation from urinary and faecal incontinence needs to be addressed as these are a common cause of irritation and make underlying skin pathology worse. 'Soap substitution' with a bland cream or ointment based emollient is best for cleansing. The same agent can then be used as a moisturiser to both provide a barrier to the site and soothe inflamed skin. There is no preferred emollient to use and the best one is the one the patient will adhere to. Emollient creams (not ointments) can be placed in the fridge as this can help soothe the skin.

### **Using of topical steroids on the vulva**

Topical steroids reduce inflammation associated with skin diseases such as lichen planus, lichen sclerosus and eczema leading to improvement in symptoms and appearance. However, there are patient and physician concerns at the use of topical steroids due to worry about side-effects, particularly skin or mucosal atrophy, which can lead to undertreatment and less control of symptoms. It is important therefore to use the correct strength of topical steroid for the necessary length of time on the appropriate body site with the clear instructions to patient so that they can be confident in self-management and be reassured that when applied correctly 'skin thinning' is very unlikely. Mucosal surfaces such as the vulval vestibule are remarkably resistant to steroid atrophy. Table 3 outlines the recommended potency of topical steroid for treatment of inflammatory conditions frequently seen in the vulval clinic.

In *lichen sclerosus* and *lichen planus*, the use of superpotent topical steroids is recommended as first-line therapy. A recent Cochrane systematic review showed there is reasonable randomised controlled trial evidence for the use of topical steroids in lichen sclerosus and The British Association of Dermatologists suggest the use of the superpotent topical steroid, clobetasol propionate 0.05%, over a three-month reducing course (suggested daily for one month, alternate days for month and twice a week maintenance) (3,4). There are currently no specific guidelines for lichen planus, but the standard practice is to use a similar regimen as for lichen sclerosus and case series evidence supports this (5). In general topical steroids should be used once-daily. There is no evidence to suggest that twice-daily application is superior, although twice-daily

has greater potential to cause side effects. Ointments are preferable to creams as they contain fewer constituents and therefore have a lower chance of causing irritation/contact allergy. Once control of inflammation and symptoms has been achieved, topical steroids should be reduced to the minimum frequency required to maintain remission. The concept of 'weekend therapy', that is, applying topical steroids on two consecutive days per week, is effective in atopic eczema patients and can extrapolated to chronic vulval diseases such as lichen sclerosis and lichen planus where long-term maintenance therapy is required. A patient with these conditions will use approximately 30-60 g of topical steroid per year as maintenance therapy. Topical steroids should only be used on affected areas to prevent side-effects in adjacent skin. Table 4 outlines reasons why there may be a failure to respond to topical steroid treatments.

Table 4 – Reasons why there may be a failure to respond to topical steroid treatments within vulval skin conditions

- Continued exposure to irritants – eg urine or faeces, external products such as wipes or non-prescribed topical treatments and over washing with water can all contribute towards irritation and ongoing symptoms.
- Poor adherence to prescribed treatment regimen –The patient should be advised to apply the topical steroid in terms of the finger tip unit (A finger tip is from the very end of the finger to the first crease in the finger. It does NOT mean a blob on the fingertip). The number of fingertip units required is usually one to two but is specifically tailored to the patient depending upon surface area affected by the condition.
- Inaccurate placement of topical steroid – the patient may be applying the topical treatment to an unaffected area. Especially common if the patient is elderly and unable to use a mirror to see what they are doing.
- Incorrect diagnosis – if adherence and skin care practices are assessed as adequate, it may be that the diagnosis given is incorrect. An allergic contact dermatitis to topical treatments may have occurred (see section on Patch Testing) or there may be pre-malignant or malignant change in the affected area. If there is any concern a biopsy should be taken
- An inappropriate and/or weak steroid has been prescribed eg 1% hydrocortisone. Reducing the potency of the steroid ointment is not usually practiced and it is more usual to reduce the frequency of application of the suprapotent steroid.
- Superimposed infection – eg candidiasis.

### Good practice points

- Take a thorough symptom and function history and perform a systematic examination
- Describe vulval conditions in dermatological terminology to support the diagnosis
- Avoid empirical prescriptions before there is clinical evidence to support the diagnosis

- Provide written information and clear instructions to the patient where possible especially with regards the use of topical corticosteroids
- Employ a low threshold for a vulval biopsy if there is any doubt the diagnosis

## **Conclusion**

Core competencies in vulval disease for the general gynaecologist should include being able to take a detailed patient history and examination, make a diagnosis and starting basic treatment. It is important to underpin the treatments with clear explanation to the patient on vulval care and the use of topical steroids to improve clinical outcomes. Complex, rare and treatment resistant patients should be referred to a vulval service.

## **Further resources;**

Dermnetnz: The Dermatology Resource [www.dermnetnz.org](http://www.dermnetnz.org)

British Society for the Study of Vulval Disease [www.bssvd.org](http://www.bssvd.org)

Online resource endorsed by the ISSVD <http://vulvovaginaldisorders.com/>

Online training course which is free to UK doctors to access [www.e-lfh.org.uk/projects/dermatology/index.html](http://www.e-lfh.org.uk/projects/dermatology/index.html)

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## FIGURES

Figure 1: Schematic representation of the normal adult vulva. Copyright “Dawn Danby and Paul Waggoner”, c/o ISSVD

Figure 2: Vulval eczema (dermatitis). Note poorly defined erythema of the genitocrural skin, erosions due to excoriation in the inflamed skin and white thickening (lichenification) of the labia majora due to scratching. This appearance may be due to atopic eczema, or an external cause as in contact dermatitis (either irritant or allergic contact dermatitis).

Figure 3: Psoriasis affecting the female genitalia. Well demarcated erythema surrounding the anogenital area with typical psoriatic plaques in surrounding skin. The genital plaque has typical scale in the perianal area, but lack of scale in the perineal and vulval areas.

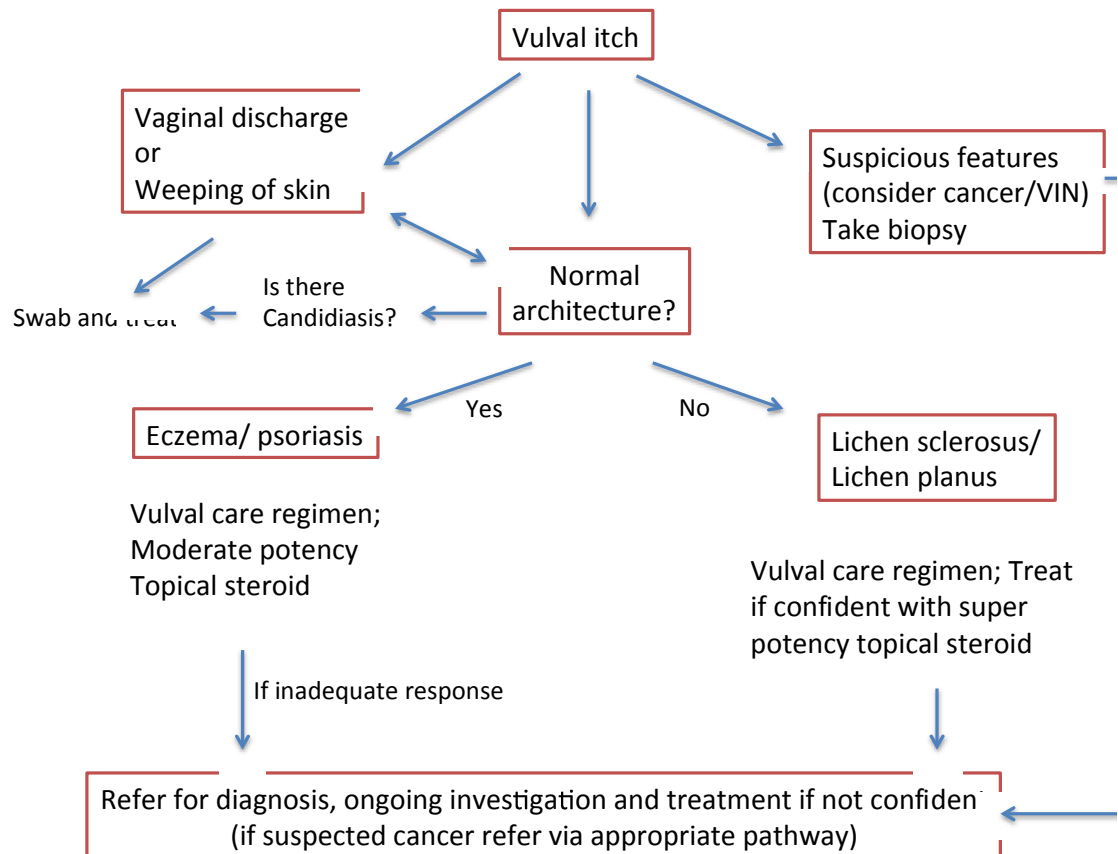
Figure 4– algorithm for the management of vulval itching

Figure 5: Advanced vulval lichen sclerosus. Whiteness, loss of anatomy, ecchymosis seen on the left labia, scarring over the clitoral hood

Figure 6: Skin lichenification

Figure 7. Erosive lichen planus. Well demarcated symmetrical erosions present at the vaginal introitus. Note anatomical changes with loss of the labia minora and clitoral hood, anterior fusion and narrowing of the vaginal opening.

Fig 4– algorithm for the management of vulval itching



### MCQ questions True False

*With regards vulval inflammatory skin conditions,*

- a. Vulval psoriasis should be treated with a superpotent topical steroid
- b. Side effects from topical steroid use are uncommon
- c. Dermatologist patch testing should be considered for all patients with recurrent vulval itching
- d. Erosive lichen planus presents with pain rather than itch
- e. The risk of squamous cell carcinoma development in lichen sclerosus is 10%

### Answers to question

(a) F (b) T (c) F (d) T (e) F

### Explanation to answers

NICE guidance recommends that moderate potency topical steroids are used for vulval psoriasis, With regards the topical use of steroids on the vulva, If an appropriate strength and frequency of topical steroid are used, side effects such as atrophy and striae are uncommon (less than 5%). Dermatologist patch testing should be considered for only for those patients where allergic contact dermatitis require exclusion. Erosive lichen planus is usually painful due to mucosal erosion. Classical lichen planus is itchy, the erosive variant of lichen planus is painful. The risk of squamous cell carcinoma development in lichen sclerosus is less than 5%.

*With regards skin lesion morphology*

- a. A papule is a small palpable lesion less than 0.5cm in diameter
- b. An ulcer is a shallow denuded area due to loss of the epidermis (surface layer of skin)
- c. Patients with vulval skin lichenification usually have painful, thickened skin in the area scratching
- d. A vesicle is a small fluid filled blister less than 0.5cm diameter

e. Vulval intraepithelial neoplasia may be plaque-like

Answers to question

(a) T (b) F (c) F (d) T (e) T

Explanation to answers

An erosion is a shallow denuded area due to loss of the epidermis (surface layer of skin). Pruritus is usually the main symptom with lichenification and secondary pain may be present if the skin is broken through scratching. Vulval intraepithelial neoplasia has not been covered in this article but can present in a variety of dermatological forms but is usually plaque –like.