



Vulval disease in childhood

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Summary

Prepubertal girls with vulvovaginitis usually have a dermatological problem. Dermatitis, psoriasis and lichen sclerosus are the three most common conditions. Poor hygiene is rarely responsible for vulval symptoms and intravaginal foreign bodies are rare. Candidiasis is not seen in the non-oestrogenised vulva and vagina. Infective vulvovaginitis in girls is almost always due to Group A beta-haemolytic streptococci. Sexual abuse is always an issue to be considered in any genital presentation in children, but is rarely a cause of observable vulval disease. Most vulval disease in children can be diagnosed on history and examination alone and no investigation, except a bacterial swab, is required.

Key words: dermatitis, sexual abuse, vulvovaginitis.

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Introduction

Girls who present with a vulval rash or itching are often given a prescription for an antifungal cream. This is inappropriate as most cases of vulval itching are caused by an atopic or irritant dermatitis.

Vulval rashes fluctuate in appearance, so the vulva may appear normal. If there have been significant symptoms, review the patient when her symptoms are at their worst. The diagnosis can then usually be made without the need for laboratory tests.

Dermatitis

Girls who suffer from vulval dermatitis are usually atopic and react adversely to common environmental irritants such as soap, bubble bath, using shampoo in the bath, and swimming in chlorinated swimming pools. Healthy children may experience contact dermatitis as a result of contact with faeces most often due to diarrhoea or chronic constipation with soiling. Girls who shower rather than bath may miss washing the vulval area effectively.

Vulval dermatitis presents with vulval itching and a fluctuating rash, often precipitated by contact with irritants. It is exacerbated by excessive washing and the use of antifungal creams.^{1,2} Scratching is a source of embarrassment for the child's parents and attracts unwelcome attention at school. It is common for

girls with vulval itching to wake in a distressed state at night.

Examination is often unremarkable and any rash is poorly defined. Close inspection may reveal some erythema, scale and slight rugosity of the labia majora, and increased erythema and desquamation of the minora. The desquamation may stain the child's underwear and be misinterpreted as a vaginal discharge. If the rash is severe it may extend to the inguinal areas and buttocks. Superinfection with *Staphylococcus aureus* may occur on the skin, but there is no vaginitis and vaginal swabs and urine culture are invariably negative. A greenish discharge in the absence of symptoms or positive bacteriology can be regarded as a normal variant.

Psoriasis

In babies, psoriasis may present for the first time as a persistent nappy rash. In older children the morphology of the rash is an itchy, red, well-demarcated, symmetrical plaque with no scale. The vulva, perineum, perianal area and often the natal cleft may all be involved.^{1,3}

If psoriasis is confined to the vulva, it is difficult to make a definite diagnosis unless there are other diagnostic clues present. A history of cradle cap or problematic nappy rashes as a baby, nail pitting, post auricular or scalp rashes and a family history are all helpful.

Lichen sclerosus

Lichen sclerosus is a rare skin disease with a predilection for the genital area. It is much commoner in females than males. The tendency to develop it is probably genetic as it may be familial and there is an association with autoimmune disease. Although it is usually asymptomatic outside the genital area, it tends to be intensely itchy on the vulva. In children soreness, dysuria, bleeding and chronic constipation may also occur. These children are therefore often investigated for bowel and urinary tract abnormalities and lichen sclerosus can be mistaken for a sign of sexual abuse.^{4,5}

On examination there is a well-demarcated white plaque with a wrinkled surface and scattered telangiectasia which may bleed. The typical distribution is a figure of eight plaque surrounding the vagina and anus, but any pattern on the vulva, perineum or perianal area may be seen. The vagina is not involved. Lichen sclerosus can be complicated by loss of the labia minora and clitoris under scar tissue.

Lichen sclerosus does not always remit at puberty. Although symptoms may settle, silent progression of scarring and atrophy

may occur, and symptom activity may recur later. There is an association (about 2–6%) with squamous cell carcinoma of the vulva in adult life. This cancer has been reported in relatively young women who have had lichen sclerosus since childhood.⁶ Lichen sclerosus should therefore be actively managed and follow-up should ideally be lifelong. Treatment involves the use of a potent topical corticosteroid.⁷

Streptococcal vulvovaginitis

The most common cause of acute vulvovaginitis in prepubertal children is Group A haemolytic streptococcus.⁸ Any case of acute vulvitis in a child should suggest this condition.

The girl presents with a sudden onset of an erythematous, swollen, painful vulva and vagina, with a thin mucoid discharge. There may have been a preceding throat infection with the same organism, or preceding perianal dermatitis.

The infection is easily diagnosed by introital and perianal swabs. It is not necessary to insert the swab right into the vagina, which children usually find traumatic, particularly when the area is tender.

After swabs are taken the child starts either oral penicillin or amoxycillin, or cephalexin if they are allergic to penicillin. The course must run for a full 10 days to prevent recurrence.

Pinworm

Although many children with pinworm infestation are asymptomatic, they can have perianal and vulval itching, particularly at night. An eczematous rash may occur. Pinworm is very well known as a cause of genital itching in children. Many children with vulval disease will already have been treated with mebendazole by their parents or their pharmacist before they see a doctor. If already treated, another cause of itching should be sought.

Fungal infections

Although tinea can present rarely in the genital area in children, candida infections do not occur in healthy children out of nappies. This oestrogen-dependent condition is not seen after infancy in children with normal immune systems.^{1,2,3}

This is an important point, as it is common for children with skin diseases such as dermatitis and psoriasis to be diagnosed as having 'thrush'. Treatment with antifungal creams may cause irritation, particularly if dermatitis is present.

Foreign bodies

Intravaginal foreign bodies are not common. The foreign material is usually fragments of toilet paper or fluff. Small toys are less common.⁹

The child presents with a persistent purulent discharge heavy enough to cause maceration of the vulval skin. Swabs confirm recurrent bacterial infection which responds to courses of

antibiotics but rapidly recurs. The child requires examination under anaesthesia and saline lavage.

Sexual abuse

There is often a greater emotional overlay attached to any condition of the genital area than other parts of the skin. If there is concern about sexual abuse consider referral to a paediatrician or child protection unit. If you are not sure whether the child's problem is a skin condition or a sign of trauma, refer the child to a dermatologist for an opinion before taking any action.

Many parents of children with vulval disease are scared of the possibility of sexual abuse, but few will raise the issue unless prompted. Sexually abused children usually have no physical signs.¹⁰

Management of children with vulval symptoms

Most cases can be diagnosed by the history and examination. A vulval swab may be needed to rule out superinfection or acute streptococcal vaginitis, but a urine culture is not necessary unless there are symptoms of frequency or dysuria. (These can sometimes result from irritation of the opening of the urethra.) Children find vaginal swabs traumatic and a moistened saline swab from the introitus is sufficient if there is vaginal discharge.

Dermatitis

It is important for the parents of children with any form of dermatitis to realise that their child has a chronic problem which may require ongoing daily treatment. Modify the environment to avoid contact with soap, bubble bath and shampoo. It is preferable for girls to bath using a bath oil rather than shower. They should avoid tight lycra clothes and wear cotton underwear. Ask about perfumed products, such as toilet paper and wet wipes, and the use of previous medication both prescribed and over-the-counter.

Chlorinated water is a powerful irritant. Apply vaseline or zinc cream before swimming. Remove the costume and then shower the child before going home.

Incontinence, either enuresis or constipation with overflow, needs to be dealt with. Night nappies should be discarded if possible.

Most cases of vulval dermatitis will respond to 1% hydrocortisone, as long as the environmental changes are also made. Ointment is preferable to creams which may cause stinging. Many parents are very apprehensive about using topical steroids. In practice 1% hydrocortisone is very safe. Pre-empt anxiety with strong reassurance and a warning that the pharmacist, the naturopath and well-meaning relatives may well recommend caution regarding the use of topical steroids. If dermatitis is resistant to treatment with environmental modification and 1% hydrocortisone cream, consider non-compliance, infection and psoriasis.

Psoriasis and lichen sclerosus

When the rash is erythematous but well defined, and particularly when there is perianal involvement, look for other signs of psoriasis and enquire about a family history. A white, well-defined eruption may suggest lichen sclerosus.

A patient with suspected genital psoriasis or lichen sclerosus is best referred to a dermatologist as treatment requires use of a potent topical corticosteroid.

Other conditions

Ask if the child has been treated for possible pinworm infestation. Be aware that a child who complains of persistent symptoms despite repeated normal examination and negative bacteriology may be demonstrating attention-seeking behaviour. If you are unsure, it may be best to refer such patients.

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Conflict of interest: none declared

Self-test questions

The following statements are either true or false (answers on page 107)

1. Most cases of vulval dermatitis will respond to 1% hydrocortisone.
2. Candida is the most common cause of vulval itching in prepubertal girls.

Your questions to the PBAC

Adrenaline

I would like to ask the Pharmaceutical Benefits Advisory Committee (PBAC) why repeat prescriptions of the adrenaline auto-injectors, EpiPen and EpiPen Jr, are not available. Anaphylactic risk is a lifelong condition, which will not change much over time. The auto-injectors also have a short half-life so the need to see the doctor for a new prescription every six months just to maintain a supply of a rarely used emergency drug seems inappropriate. A review every couple of years would be reasonable.

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PBAC response:

Both EpiPen formulations were recommended for listing on the basis of acceptable cost-effectiveness overall, although the estimates of incremental cost-effectiveness were both high

and uncertain. The PBAC therefore recommended a rigorous Pharmaceutical Benefits Scheme (PBS) listing that would prevent use in those instances where cost-effectiveness had not been demonstrated.

To maximise the cost-effective use of the products, the PBAC sought to minimise the number discarded due to the short expiry date by limiting the number of auto-injectors that can be prescribed. Consequently, it recommended that the maximum quantity be limited to one auto-injector for adults and two auto-injectors for patients under 17 years of age, and that no repeats apply.

Data presented to the PBAC indicated that listing with these restrictions would meet the clinical needs of most patients given that on average, the number of auto-injectors required per patient per year (as a replacement for either a used or an expired auto-injector) would be covered by one prescription.

With respect to the short expiry date, I have been advised by the manufacturer that most auto-injectors will expire around 12 months after being dispensed, but it is actively pursuing ways of extending the expiry dates.