

Balanitis – Management

Scenario: Diagnosis of balanitis in children

Balanitis - Management

View full scenario

How should I diagnose balanitis in children?

Diagnose balanitis in a child on the basis of clinical findings:

Penile soreness, itch, and odour which usually develop over a few days.

Redness of the glans penis (and often the foreskin) with exudate is usual.

The glans penis and foreskin may be swollen.

A sub-preputial swab is not necessary to make a diagnosis, but can be useful for identifying the underlying cause if symptoms are severe or persistent.

Basis for recommendation

This information is based on expert opinion from review articles of secondary care management [Escala and Rickwood, 1989; Orden et al, 1996].

How should I assess a child with balanitis to identify the cause?

For a list of causes of balanitis in children, see Causes in children.

Ask about:

Hygiene practices (for example, how often is the nappy changed or penis cleaned?) — lack of hygiene predisposes to non-specific dermatitis.

Exposure to irritants — such as bubble bath, detergents, or creams.

Trauma — from 'foreskin fiddling'.

Other skin conditions (such as eczema).

Look for clinical features and skin conditions which may suggest a specific underlying cause.

Take a sub-preputial swab if balanitis is:

Severe (suggesting a secondary infection).

Mild, but persists despite treatment.

Clinical features of underlying causes

Non-specific dermatitis — redness of the glans penis which often extends onto the skin of the shaft of the penis.

Contact balanitis — redness of the glans penis with localized swelling. This is most commonly irritant contact dermatitis; allergic contact dermatitis is unusual in children.

Candidal balanitis — redness on the undersurface of the glans penis, with sparing around the urethral meatus. Small, eroded papules may be present with a white cheese-like matter, that can be rubbed off easily.

Bacterial infection (for example group A beta-haemolytic streptococci or *Staphylococcus aureus*) — penile redness and pain, often accompanied by a purulent exudate. Systemic symptoms, such as fever, may also occur.

Basis for recommendation

These recommendations are based on expert advice from review articles [Orden et al, 1996; Schwartz and Rushton, 1996].

Predisposing factors

Non-specific dermatitis is thought to be the most common cause of balanitis. However, occasionally, specific irritants may be identified that will require avoidance [Schwartz and Rushton, 1996].

Sub-preputial swab

A swab can be useful to confirm, or exclude, an infectious cause of balanitis. However, most children with balanitis presenting in primary care probably have mild non-specific dermatitis (with or without candidal or bacterial colonization), which usually responds quickly to empirical treatment — making it unnecessary to swab all children.

A case series investigating boys (n = 32) with balanitis presenting in secondary care suggests that more severe balanitis (increased erythema and exudate) indicates a bacterial infection [Escala and Rickwood, 1989]. Therefore, it seems sensible to swab when balanitis is severe, or not responding to treatment with a combined topical corticosteroid and antifungal.

Balanitis – Management

Scenario: Diagnosis of balanitis in adults

Balanitis – Management

[View full scenario](#)

How should I diagnose balanitis in adults?

Diagnose balanitis in an adult on the basis of clinical findings:

Penile soreness, itch, and odour are common symptoms.

Redness on the glans penis (and often the foreskin) with exudate are usual. Swelling of the glans penis and foreskin may be seen.

Dysuria and dyspareunia may occur.

Balanitis is mostly seen in uncircumcised men and an inability to retract the foreskin is common.

Swabs (for example, a sub-preputial swab) are not necessary for diagnosis, but can be useful for identifying the underlying cause if symptoms are severe, recurrent, or persistent.

Basis for recommendation

These recommendations are based on expert opinion from secondary care review articles which indicate that balanitis usually presents with specific clinical features [Edwards, 1996; English et al, 1997].

How should I assess an adult with balanitis to identify the cause?

For a list of causes in adults, see Causes in adults.

Ask about:

Hygiene practices (for example, how often is the penis cleaned?) — lack of hygiene predisposes to non-specific dermatitis.

Exposure to irritants — such as soaps or creams.

Trauma — for example, during sexual intercourse or vigorous cleaning.

Exposure to infections — has the man's partner had bacterial vaginosis or a vaginal candidal infection?

A history of diabetes or immunosuppression — which predisposes to infection.

Look for clinical features of balanitis and for other skin conditions elsewhere (such as seborrhoeic dermatitis), which suggest a specific underlying cause.

Take a sub-preputial swab if balanitis is:

- Severe.
- Recurrent.
- Mild, but persists despite treatment.

Only swab for Gardnerella-associated balanitis if this is suspected clinically. State 'gardnerella' on the laboratory form when requesting the test, as most laboratories will not routinely test for the organism.

Check blood glucose levels or urine for glycosuria if balanitis is severe, persistent, or recurrent (especially if candidal balanitis is present).

Clinical features of underlying causes

Non-specific dermatitis — redness of the glans penis, which often extends onto the skin of the shaft of the penis.

Candidal balanitis — redness on the undersurface of the glans penis, with sparing around the urethral meatus. Small, eroded papules may be present with a white cheese-like matter, that can be rubbed off easily. In people with diabetes, candidal balanitis often presents with more severe features (such as intense redness of the glans penis and pain).

Irritant or allergic contact dermatitis — redness of the glans penis with localized swelling (especially in allergic contact dermatitis).

Gardnerella-associated balanitis — a fishy odour and a sub-preputial mucoid discharge (see the CKS topic on Bacterial vaginosis).

Streptococcal infection — may present with a rapid onset of severe penile redness and pain, and is usually accompanied by a purulent exudate. Streptococcal balanitis with exudate can be distinguished clinically from urethritis with urethral discharge by the pattern of redness on the glans penis. In streptococcal infections there is usually no redness of the urethral meatus, unlike urethritis where the urethral meatus is typically red.

Basis for recommendation

These recommendations are based on expert advice from review articles [Alsterholm et al, 2008; Bhalani et al, 2008; Singh and Bunker, 2008].

Predisposing factors

Poor hygiene, recurrent trauma, or exposure to irritants are common causes of balanitis; therefore, identifying and correcting these predisposing factors will reduce the risk of recurrence [Birley et al, 1993; Fornasa et al, 1994].

Sub-preputial swab

A swab is useful to confirm, or exclude, an infectious cause of balanitis. Most people with balanitis presenting in primary care have mild non-specific dermatitis (with or without candidal colonization), which usually responds rapidly to empirical treatment. Therefore, it seems sensible to swab when balanitis is severe or recurrent, or not settling despite treatment with a combined topical corticosteroid and antifungal.

Excluding diabetes

Diabetes predisposes to skin infections, especially candidal infections, and people with diabetes often develop severe infections. A survey of 138 men with candidal balanitis found one in 10 had diabetes that was previously undiagnosed. Therefore, excluding diabetes in men with severe or recurrent balanitis is recommended [Waugh, 1998].

Balanitis – Management

Scenario: Balanitis in children

Balanitis - Management

[View full scenario](#)

How should I manage a child with balanitis?

Advise the child or the parents or carers to clean the penis with luke warm water and gently dry it.

No attempt should be made to retract the foreskin to clean under it, if it is still fixed.

Soap, bubble bath, or baby wipes should not be used.

If the child is still in nappies, these need to be changed frequently (see the CKS topic on Nappy rash).

For suspected non-specific dermatitis, with or without candidal or bacterial colonization:

Prescribe topical hydrocortisone 1% combined with an imidazole cream (clotrimazole 1%, miconazole 2%, or econazole 1%) once or twice a day until symptoms settle, or for up to 14 days.

If symptoms are not improving by 7 days:

Advise people to stop treatment with topical hydrocortisone.

Take a sub-preputial swab to exclude or confirm a fungal or bacterial infection, and treat accordingly.

For suspected irritant or allergic contact dermatitis:

Discontinue any suspected triggers (such as soap or creams).

Prescribe a mild topical hydrocortisone 1% cream or ointment once a day until symptoms settle, or for up to 14 days.

If symptoms are not improving by 7 days:

Advise people to stop treatment with topical hydrocortisone.

Take a sub-preputial swab to exclude or confirm a fungal or bacterial infection, and treat accordingly.

For suspected or confirmed candidal balanitis:

Prescribe an imidazole cream (clotrimazole 1%, econazole 1%, ketoconazole 2%, or miconazole 2%) twice a day until symptoms settle.

If inflammation is causing discomfort, consider prescribing hydrocortisone 1% cream or ointment for up to 14 days in addition to an antifungal.

If symptoms are not improving by 7 days:

Advise people to stop treatment with topical hydrocortisone.

Take a sub-preputial swab to exclude or confirm a fungal or bacterial infection, and treat accordingly.

For suspected or confirmed bacterial balanitis:

Prescribe oral flucloxacillin for 7 days.

Oral erythromycin or clarithromycin for 7 days are alternatives for boys who are allergic to penicillin (see Prescriptions).

Adjust treatment if indicated by sub-preputial swab results.

If inflammation is causing discomfort, consider prescribing hydrocortisone 1% cream or ointment for up to 14 days in addition to an antibiotic.

If symptoms are not improving by 7 days:

Advise people to stop treatment with topical hydrocortisone.

Take a sub-preputial swab to exclude or confirm a fungal or bacterial infection, and treat accordingly.

Basis for recommendation

These recommendations are based on expert advice from review articles [Orden et al, 1996; Schwartz and Rushton, 1996].

Non-specific dermatitis, with or without candidal or bacterial colonization

A mild topical corticosteroid combined with an imidazole to treat the dermatitis (and any candidal infection) seems a logical approach if the balanitis is mild and clinical suspicion of a bacterial infection is low.

Candidal balanitis

Topical imidazoles are recommended by experts based on their proven effectiveness in the treatment of candidiasis of the skin, toenails, and perineum in infants [Hay and Moore, 2004].

CKS recommends continuing treatment until symptoms have settled, based on advice given in the UK national guideline on the management of balanoposthitis from the British Association for Sexual Health and HIV, for people older than 16 years of age [BASHH, 2008]. Although the licences for most antifungal drugs recommend continuing treatment for a short period of time after clinical cure, CKS found no evidence to support this approach in balanitis.

Bacterial balanitis

An antibiotic with activity against group A beta-haemolytic streptococci and *Staphylococcus aureus* (bacteria that commonly cause bacterial balanitis) will usually result in rapid resolution of symptoms and eradication of the offending organism. CKS found no specific trial evidence for the use of antibiotics for balanitis.

The recommendation to use the flucloxacillin antibiotic is based on expert opinion from personal communication [Barrett, Personal Communication, 2009].

When should I refer a child with balanitis?

If balanitis is recurrent or chronic, refer to a paediatrician or a dermatologist.

Basis for recommendation

This recommendation is based on expert advice from review articles [Edwards, 1996; English et al, 1997].

Most pre-pubertal boys only experience a single episode of balanitis. Therefore, if symptoms are recurrent or significant phimosis is present, a paediatric urologist may consider circumcision [Escala and Rickwood, 1989].

Prescriptions

For information on contraindications, cautions, drug interactions, and adverse effects, see the electronic Medicines Compendium (eMC) (<http://emc.medicines.org.uk>), or the British National Formulary (BNF) (www.bnf.org).

Topical imidazoles

Age from 1 month to 16 years

Clotrimazole 1% cream

Clotrimazole 1% cream

Apply to the affected area 2 to 3 times a day until symptoms have settled.

Supply 20 grams.

Age: from 1 month to 16 years

NHS cost: £2.64

OTC cost: £4.65

Licensed use: yes

Patient information: Wash hands after applying cream. If possible leave the affected area exposed to the air at night.

Econazole 1% cream

Econazole 1% cream

Apply to the affected area twice a day, until symptoms have settled.

Supply 30 grams.

Age: from 1 month to 16 years

NHS cost: £2.56

OTC cost: £4.51

Licensed use: yes

Patient information: Wash hands after applying cream. If possible leave the affected area exposed to the air at night.

Ketoconazole 2% cream

Ketoconazole 2% cream

Apply to the affected area twice a day, until symptoms have settled.

Supply 30 grams.

Age: from 1 month to 16 years

NHS cost: £3.54

Licensed use: yes

Patient information: Wash hands after applying cream. If possible leave the affected area exposed to the air at night.

Miconazole 2% cream

Miconazole 2% cream

Apply to the affected area twice a day, until symptoms have settled.

Supply 30 grams.

Age: from 1 month to 16 years

NHS cost: £1.93

OTC cost: £3.41

Licensed use: yes

Patient information: Wash hands after applying cream. If possible leave the affected area exposed to the air at night.

Topical corticosteroids

Age from 1 month to 16 years

Hydrocortisone 1% cream

Hydrocortisone 1% cream

Apply thinly to the affected area once or twice a day. If there is no improvement after 7 days return to your doctor; if there is an improvement, continue using this cream for up to 14 days. Supply 15 grams.

Age: from 1 month to 16 years

NHS cost: £1.52

Licensed use: yes

Patient information: Do not use this cream for more than 14 days.

Hydrocortisone 1% ointment

Hydrocortisone 1% ointment

Apply thinly to the affected area once or twice a day. If there is no improvement after 7 days return to your doctor; if there is an improvement, continue using this cream for up to 14 days. Supply 15 grams.

Age: from 1 month to 16 years

NHS cost: £0.72

Licensed use: yes

Patient information: Do not use this ointment for more than 14 days.

Anticandidal + hydrocortisone preparations

Age from 1 month to 16 years

Clotrimazole 1% + hydrocortisone 1% cream

Clotrimazole 1% / Hydrocortisone 1% cream

Apply thinly to the affected area once or twice a day. If there is no improvement after 7 days return to your doctor; if there is an improvement, continue using this cream for up to 14 days. Supply 30 grams.

Age: from 1 month to 16 years

NHS cost: £2.15

Licensed use: yes

Patient information: Wash hands after applying cream. If possible leave the affected area exposed to the air at night. This cream only needs to be applied thinly. Do not use for more than 14 days.

Miconazole 2% + hydrocortisone 1% cream

Miconazole 2% / Hydrocortisone 1% cream

Apply thinly to the affected area once or twice a day. If there is no improvement after 7 days return to your doctor; if there is an improvement, continue using this cream for up to 14 days. Supply 30 grams.

Age: from 1 month to 16 years

NHS cost: £1.90

Licensed use: yes

Patient information: Wash hands after applying cream. If possible leave the affected area exposed to the air at night. This cream only needs to be applied thinly. Do not use for more than 14 days.

Nystaform HC cream (contains nystatin and hydrocortisone 0.5%)

Nystaform HC cream

Apply thinly to the affected area once or twice a day. If there is no improvement after 7 days return to your doctor; if there is an improvement, continue using this cream for up to 14 days. Supply 30 grams.

Age: from 1 month to 16 years

NHS cost: £2.66

Licensed use: yes

Patient information: Wash hands after applying cream. If possible leave the affected area exposed to the air at night. This cream only needs to be applied thinly. Do not use for more than 14 days.

Timodine cream (contains nystatin + hydrocortisone 0.5%)

Timodine cream

Apply thinly to the affected area once or twice a day. If there is no improvement after 7 days return to your doctor; if there is an improvement, continue using this cream for up to 14 days. Supply 30 grams.

Age: from 1 month to 16 years

NHS cost: £2.38

Licensed use: yes

Patient information: Wash hands after applying cream. If possible leave the affected area exposed to the air at night. This cream only needs to be applied thinly. Do not use for more than 14 days.

Antibiotics for 7 days

Age from 1 month to 11 months

Clarithromycin suspension: child weighs 7.9kg or less

Clarithromycin 125mg/5ml oral suspension

WEIGHT REQUIRED Take 7.5mg per kg bodyweight TWICE a day for 7 days.

Supply 70 ml.

Age: from 1 month to 11 months

NHS cost: £5.58

Licensed use: yes

Age from 1 month to 1 year 11 months

Flucloxacillin oral solution: 62.5mg four times a day

Flucloxacillin 125mg/5ml oral solution

Take 2.5ml four times a day for 7 days.

Supply 100 ml.

Age: from 1 month to 1 year 11 months

NHS cost: £5.03

Licensed use: yes

Erythromycin s/f suspension: 125mg four times a day

Erythromycin ethyl succinate 125mg/5ml oral suspension sugar free

Take one 5ml spoonful four times a day for 7 days.

Supply 140 ml.

Age: from 1 month to 1 year 11 months

NHS cost: £2.80

Licensed use: yes

Age from 1 year to 2 years 11 months

Clarithromycin suspension: child weighs 8kg to 11.9kg

Clarithromycin 125mg/5ml oral suspension
Take 2.5ml twice a day for 7 days.
Supply 70 ml.

Age: from 1 year to 2 years 11 months
NHS cost: £5.58
Licensed use: yes

Age from 2 years to 9 years 11 months

Flucloxacillin oral solution: 125mg four times a day

Flucloxacillin 125mg/5ml oral solution
Take one 5ml spoonful four times a day for 7 days.
Supply 200 ml.

Age: from 2 years to 9 years 11 months
NHS cost: £5.88
Licensed use: yes

Age from 2 years to 11 years 11 months

Erythromycin s/f suspension: 250mg four times a day

Erythromycin ethyl succinate 250mg/5ml oral suspension sugar free
Take one 5ml spoonful four times a day for 7 days.
Supply 140 ml.

Age: from 2 years to 11 years 11 months
NHS cost: £3.65
Licensed use: yes

Age from 3 years to 6 years 11 months

Clarithromycin suspension: child weighs 12kg to 19.9kg

Clarithromycin 125mg/5ml oral suspension
Take one 5ml spoonful twice a day for 7 days.
Supply 70 ml.

Age: from 3 years to 6 years 11 months
NHS cost: £5.58
Licensed use: yes

Age from 7 years to 9 years 11 months

Clarithromycin suspension: child weighs 20kg to 29.9kg

Clarithromycin 125mg/5ml oral suspension
Take 7.5ml twice a day for 7 days.
Supply 140 ml.

Age: from 7 years to 9 years 11 months
NHS cost: £11.16
Licensed use: yes

Age from 10 years to 11 years 11 months

Flucloxacillin oral solution: 250mg four times a day

Flucloxacillin 250mg/5ml oral solution
Take one 5ml spoonful four times a day for 7 days.
Supply 200 ml.

Age: from 10 years to 11 years 11 months
NHS cost: £16.92
Licensed use: yes

Clarithromycin suspension: child weighs 30kg or more

Clarithromycin 250mg/5ml oral suspension
Take one 5ml spoonful twice a day for 7 days.
Supply 70 ml.

Age: from 10 years to 11 years 11 months
NHS cost: £11.16
Licensed use: yes

Age from 12 years onwards

Flucloxacillin capsules: 250mg four times a day

Flucloxacillin 250mg capsules
Take one capsule four times a day for 7 days.
Supply 28 capsules.

Age: from 12 years onwards
NHS cost: £2.12
Licensed use: yes

Erythromycin e/c tablets: 250mg four times a day

Erythromycin 250mg gastro-resistant tablets
Take one tablet four times a day for 7 days.
Supply 28 tablets.

Age: from 12 years onwards
NHS cost: £2.59
Licensed use: yes

Clarithromycin tablets: 250mg twice daily for 7 days

Clarithromycin 250mg tablets
Take one tablet twice a day for 7 days.
Supply 14 tablets.

Age: from 12 years onwards
NHS cost: £3.38
Licensed use: yes

Scenario Balanitis – Management

Scenario: Balanitis in adults

How should I assess an adult with balanitis?

Look for ulceration, inguinal lymphadenopathy, urethritis (dysuria and urethral discharge), and features suggestive of specific balanitides or neoplasia (as referral is indicated).

Basis for recommendation

This recommendation is based on the criteria for referral — see the Basis for recommendation for Referral.

How should I manage an adult with balanitis?

Advise daily cleaning under the foreskin with luke warm water, followed by gentle drying.

Soap or other irritants should not be used on the genitalia.

Consider prescribing an emollient (such as emulsifying ointment) as a soap substitute.

For suspected non-specific dermatitis, with or without candidal colonization:

Prescribe topical hydrocortisone 1% combined with an imidazole cream (clotrimazole 1%, miconazole 2%, or econazole 1%) once or twice a day until symptoms settle, or for up to 14 days.

If symptoms are not improving by 7 days:

Advise people to stop treatment with topical hydrocortisone.

Take a sub-preputial swab to exclude or confirm a fungal or bacterial infection, and treat accordingly.

For suspected irritant or allergic contact dermatitis:

Discontinue any suspected triggers (such as latex condoms, creams, or soaps).

Prescribe a mild topical hydrocortisone 1% cream or ointment once a day until symptoms settle, or for up to 14 days.

If symptoms are not improving by 7 days:

Advise people to stop treatment with topical hydrocortisone.

Take a sub-preputial swab to exclude or confirm a fungal or bacterial infection, and treat accordingly.

For suspected candidal balanitis:

Prescribe an imidazole cream (clotrimazole 1%, econazole 1%, ketoconazole 2%, or miconazole 2%) twice a day until symptoms settle, or oral fluconazole 150 mg as a single dose (licensed for people 16 years of age and older).

If inflammation is causing discomfort, consider prescribing hydrocortisone 1% cream or ointment for up to 14 days in addition to antifungal treatment.

If symptoms are not improving by 7 days:

Advise people to stop treatment with topical hydrocortisone.

Take a sub-preputial swab to exclude or confirm a fungal or bacterial infection, and treat accordingly.

For suspected or confirmed Gardnerella-associated balanitis:

Prescribe oral metronidazole (400 mg twice a day) for 7 days.

If inflammation is causing discomfort, consider prescribing hydrocortisone 1% cream or ointment for up to 14 days in addition to metronidazole.

If symptoms are not improving by 7 days:

Advise people to stop treatment with topical hydrocortisone.

Take a sub-preputial swab to exclude or confirm a fungal or bacterial infection, and treat accordingly.

For suspected or confirmed streptococcal balanitis:

Prescribe oral amoxicillin (500 mg four times a day) for 7 days.

Oral erythromycin (500 mg four times a day) or clarithromycin (250 mg twice a day) for 7 days are alternatives for men who are allergic to penicillin.

If inflammation is causing discomfort, consider prescribing hydrocortisone 0.5–1% cream or ointment for up to 14 days in addition to antibiotic treatment. If symptoms are not improving by 7 days:

Advise people to stop treatment with topical hydrocortisone.

Take a sub-preputial swab to exclude or confirm a fungal or bacterial infection, and treat accordingly.

If symptoms are worsening or have not settled with treatment, review the diagnosis, take a sub-preputial swab (if this has not been done already) and adjust treatment (if indicated), or seek specialist advice.

Basis for recommendation

These recommendations are based on expert advice from review articles [Edwards, 1996; English et al, 1997] and the UK national guideline on the management of balanoposthitis from the British Association for Sexual Health and HIV [BASHH, 2008].

Non-specific dermatitis, with or without candidal colonization

A combination product which treats both dermatitis and any candidal infection seems a logical approach if a bacterial infection is not suspected [Alsterholm et al, 2008].

Contact dermatitis or marked inflammation

Topical corticosteroids are widely recommended by experts [Alsterholm et al, 2008; BASHH, 2008]. CKS found no evidence evaluating the role of topical corticosteroids in the treatment of balanitis.

Candidal balanitis

Topical imidazoles and oral fluconazole are widely recommended by experts based on their proven effectiveness in the treatment of candidiasis of the skin, toenails, and perineum in infants [Hay and Moore, 2004].

CKS recommends continuing treatment until symptoms settle based on advice given in the UK national guideline on the management of balanoposthitis from the British Association for Sexual Health and HIV. Although the licences for most antifungal drugs recommend continuing treatment for a short period of time after clinical cure, CKS found no evidence to support this approach in balanitis.

CKS found no evidence that one antifungal is more effective than any other in the treatment of balanitis. However, in one study oral fluconazole was preferred to topical treatment by approximately 80% of men requiring treatment for candidal balanitis [Stary et al, 1996].

CKS found no evidence for the use of topical terbinafine for candidal infection of the skin and it is not recommended for use in children [ABPI Medicines Compendium, 2006]. Systemic treatment with terbinafine is not appropriate for refractory candidiasis and it is not licensed for this purpose [BNF 56, 2008].

Gardnerella-associated or streptococcal balanitis

An appropriate antibiotic should result in rapid resolution of symptoms and eradication of the offending organism. CKS found no specific trial evidence for the use of antibiotics for balanitis, but antibiotics are routinely used by experts when balanitis is thought to be caused by a bacterial infection.

The recommendation to use amoxicillin in streptococcal balanitis is based on expert opinion from personal communication [Barrett, Personal Communication, 2009].

How should I manage recurrent balanitis?

Treat as for an acute episode of balanitis.

Reinforce advice on personal hygiene.

In addition:

Consider prescribing an emollient (such as emulsifying ointment) as a soap substitute.

For irritant or allergic contact dermatitis, advise avoiding potential triggers such as lubricant gels, latex condoms, and topical medications.

For candidal, streptococcal or Gardnerella-associated balanitis, advise the man that his partner should be tested for infection and treated if appropriate (see the CKS topics on Bacterial vaginosis and Candida - female genital).

Basis for recommendation

These recommendations are based on expert advice from review articles [Edwards, 1996; English et al, 1997] and the UK national guideline on the management of balanoposthitis from the British Association for Sexual Health and HIV [BASHH, 2008].

Hygiene advice:

Avoiding soap and/or using a regular emollient resulted in resolution of non-specific balanitis in two case series (approximately 80 men) [Birley et al, 1993; Fornasa et al, 1994].

Testing partners for candidal, streptococcal, and Gardnerella infection:

Testing and treating partners who have a proven candidal or Gardnerella infection will prevent reinfection and recurrent balanitis.

Studies have shown that in men with candidal balanitis, their partner is more likely to have a candidal infection [Davidson, 1977; Mayser, 1999].

Studies have shown that in women with Gardnerella vaginalis, their male partners have high rates of Gardnerella in their urine or urethra [Edwards, 1996].

The primary reservoir for group B beta-haemolytic streptococci is the female genital tract, and sexual transmission is the most likely cause of streptococcal balanitis [English et al, 1997].

When should I refer an adult with balanitis?

If penile cancer is suspected, refer urgently to dermatology or urology. See the section on Penile cancer in the CKS topic on Urological cancer - suspected.

If ulceration, urethritis, or inguinal lymphadenopathy are present — refer to genitourinary medicine (GUM).

If balanitis is recurrent and associated with inability to retract the foreskin (phimosis) — refer to urology.

If balanitis is recurrent and no underlying cause can be identified, or balanitis persists despite treatment — refer to dermatology, urology, or GUM depending on the most likely underlying cause.

Basis for recommendation

These recommendations are based on expert opinion from review articles [Edwards, 1996; English et al, 1997] and the UK national guideline on the management of balanoposthitis from the British Association for Sexual Health and HIV [BASHH, 2008].

Specific balanitides or neoplasia

A dermatologist or urologist may carry out a biopsy to help confirm or exclude a diagnosis of penile cancer or specific balanitides.

A dermatologist may identify allergic contact dermatitis by patch testing.

Ulceration, urethritis, or inguinal lymphadenopathy

Ulceration, urethritis, or inguinal lymphadenopathy may indicate a sexually transmitted infection and require assessment and management by a specialist in genitourinary medicine (see the CKS topics on Chlamydia - uncomplicated genital, Herpes simplex - genital, and Trichomoniasis) [McCormack and Rein, 1995].

Persistent or recurrent balanitis

Specialist advice should be sought to exclude underlying balanitides and provide advice on further management.

Prescriptions

For information on contraindications, cautions, drug interactions, and adverse effects, see the electronic Medicines Compendium (eMC) (<http://emc.medicines.org.uk>), or the British National Formulary (BNF) (www.bnf.org).

Topical imidazoles

Age from 16 years onwards

Clotrimazole 1% cream

Clotrimazole 1% cream

Apply to the affected area 2 to 3 times a day until symptoms have settled.

Supply 20 grams.

Age: from 16 years onwards

NHS cost: £2.64

OTC cost: £4.65

Licensed use: yes

Patient information: Wash hands after applying cream. If possible leave the affected area exposed to the air at night.

Econazole 1% cream

Econazole 1% cream

Apply to the affected area twice a day, until symptoms have settled.

Supply 30 grams.

Age: from 16 years onwards

NHS cost: £2.56

OTC cost: £4.51

Licensed use: yes

Patient information: Wash hands after applying cream. If possible leave the affected area exposed to the air at night.

Ketoconazole 2% cream

Ketoconazole 2% cream

Apply to the affected area twice a day, until symptoms have settled.

Supply 30 grams.

Age: from 16 years onwards

NHS cost: £3.54

Licensed use: yes

Patient information: Wash hands after applying cream. If possible leave the affected area exposed to the air at night.

Miconazole 2% cream

Miconazole 2% cream

Apply to the affected area twice a day, until symptoms have settled.

Supply 30 grams.

Age: from 16 years onwards

NHS cost: £1.93

OTC cost: £3.41

Licensed use: yes

Patient information: Wash hands after applying cream. If possible leave the affected area exposed to the air at night.

Topical corticosteroids

Age from 16 years onwards

Hydrocortisone 1% cream

Hydrocortisone 1% cream

Apply thinly to the affected area once or twice a day. If there is no improvement after 7 days return to your doctor; if there is an improvement, continue using this cream for up to 14 days. Supply 15 grams.

Age: from 16 years onwards

NHS cost: £1.52

Licensed use: yes

Patient information: Do not use this cream for more than 14 days.

Hydrocortisone 1% ointment

Hydrocortisone 1% ointment

Apply thinly to the affected area once or twice a day. If there is no improvement after 7 days return to your doctor; if there is an improvement, continue using this cream for up to 14 days. Supply 15 grams.

Age: from 16 years onwards

NHS cost: £0.72

Licensed use: yes

Patient information: Do not use this ointment for more than 14 days.

Anticandidal + hydrocortisone preparations

Age from 16 years onwards

Clotrimazole 1% + hydrocortisone 1% cream

Clotrimazole 1% / Hydrocortisone 1% cream

Apply thinly to the affected area once or twice a day. If there is no improvement after 7 days return to your doctor; if there is an improvement, continue using this cream for up to 14 days. Supply 30 grams.

Age: from 16 years onwards

NHS cost: £2.42

Licensed use: yes

Patient information: Wash your hands after applying the cream. If possible leave the affected area exposed to the air at night. Do not use for more than 14 days.

Miconazole 2% + hydrocortisone 1% cream

Miconazole 2% / Hydrocortisone 1% cream

Apply thinly to the affected area once or twice a day. If there is no improvement after 7 days return to your doctor; if there is an improvement, continue using this cream for up to 14 days. Supply 30 grams.

Age: from 16 years onwards

NHS cost: £2.08

Licensed use: yes

Patient information: Wash your hands after applying the cream. If possible leave the affected area exposed to the air at night. This cream only needs to be applied thinly. Do not use for more than 14 days.

Nystaform HC cream (contains nystatin and hydrocortisone 0.5%)

Nystaform HC cream

Apply thinly to the affected area once or twice a day. If there is no improvement after 7 days return to your doctor; if there is an improvement, continue using this cream for up to 14 days. Supply 30 grams.

Age: from 16 years onwards

NHS cost: £2.66

Licensed use: yes

Patient information: Wash hands after applying cream. If possible leave the affected area exposed to the air at night. This cream only needs to be applied thinly. Do not use for more than 14 days.

Timodine cream (contains nystatin + hydrocortisone 0.5%)

Timodine cream

Apply thinly to the affected area once or twice a day. If there is no improvement after 7 days return to your doctor; if there is an improvement, continue using this cream for up to 14 days. Supply 30 grams.

Age: from 16 years onwards

NHS cost: £2.38

Licensed use: yes

Patient information: Wash hands after applying cream. If possible leave the affected area exposed to the air at night. This cream only needs to be applied thinly. Do not use for more than 14 days.

Fluconazole: single dose

Age from 16 years onwards

Fluconazole capsule: 150mg as a single dose

Fluconazole 150mg capsules

Take the capsule as a single dose.

Supply 1 capsule.

Age: from 16 years onwards

NHS cost: £1.60

OTC cost: £12.50

Licensed use: yes

Antibiotics for 7 days

Age from 16 years onwards

Amoxicillin capsules: 500mg three times a day

Amoxicillin 500mg capsules

Take one capsule three times a day for 7 days.

Supply 21 capsules.

Age: from 16 years onwards

NHS cost: £1.31

Licensed use: yes

Metronidazole tablets: 400mg twice a day

Metronidazole 400mg tablets

Take one tablet twice a day for 7 days.

Supply 14 tablets.

Age: from 16 years onwards

NHS cost: £0.63

Licensed use: yes

Erythromycin e/c tablets: 500mg four times a day

Erythromycin 250mg gastro-resistant tablets
Take two tablets four times a day for 7 days.
Supply 56 tablets.

Age: from 16 years onwards
NHS cost: £3.08
Licensed use: yes

Clarithromycin tablets: 250mg twice a day

Clarithromycin 250mg tablets
Take one tablet twice a day for 7 days.
Supply 14 tablets.

Age: from 16 years onwards
NHS cost: £3.28
Licensed use: yes

Emollients

Age from 16 years onwards

Emulsifying ointment BP

Emulsifying ointment
Use as a soap substitute.
Supply 500 grams.

Age: from 16 years onwards
NHS cost: £2.44
OTC cost: £4.30
Licensed use: yes

Epaderm® ointment

Epaderm emulsifying ointment
Use as a soap substitute.
Supply 500 grams.

Age: from 16 years onwards
NHS cost: £6.14
OTC cost: £10.82
Licensed use: yes

E45® cream

E45 cream
Use as a soap substitute.
Supply 500 grams.

Age: from 16 years onwards
NHS cost: £6.20
OTC cost: £9.69
Licensed use: yes