Male patient/carers of patient requesting circumcision

- No clinical symptomatology
  - Circumcision should only be funded by the NHS for medical reasons and not for religious or social reasons

Symptomatic

- Patient presents with foreskin problem/glans inflammation
  - History and examination
    - pathological phimosis
    - recurrent balanitis/balanoposthitis
    - recurrent febrile UTIs in children

Consider penile cancer
  - could include balanitis with skin changes for > 4 weeks
  - well-defined raised lesions/ulceration

Refer under 2 week wait

Balanitis

- Investigations
  - Blood/urine testing for glucose if diabetes mellitus is possible
  - Swab of discharge for microscopy, Gram staining, culture and sensitivity
  - If syphilis or another STI is suspected, refer to a GUM clinic

- Risk factors

- Management
  - In most cases topical treatment is recommended

- Treatment
  - In most cases topical treatment is recommended

- Surgery
  - Surgical referral for consideration of circumcision if balanitis is recurrent or pathological phimosis is present

Phimosis

- Investigations
  - A swab may be taken to confirm the nature of infection but attention is towards physical cleaning rather than antibiotics

- Plastic surgery
  - Various procedures may be needed:
    - dorsal incision of the foreskin
    - partial circumcision
    - release of adhesions
    - division of a short frenulum & meataloplasty
  - Advantage - the foreskin can be preserved
  - Disadvantage - phimosis can recur

- Other options
  - Intraleisonal steroid injection
  - long-term antibiotics
  - carbon dioxide laser therapy
  -radial preputioplasty alone or with intraleisonal injection of steroid
  - All have no randomised trials of efficacy and long-term outcome

- Complications
  - Phimosis is a risk factor for penile carcinoma
  - Circumcision has a beneficial effect on the incidence of invasive carcinoma of penis but not carcinoma in situ
  - Balanitis xerotica obliterans may require not just circumcision but dilatation of the urethral meatus or meataloplasty
  - No evidence that smegma is a carcinogen

- Management
  - In most cases topical treatment is recommended

- Prognosis
  - Personal hygiene is very important
    - Advise cleaning under a retractable foreskin and always reduce it to cover the glans after cleaning

- Topical steroid application to the preputial ring to treat 'phimosis' has 33-95% success

Unsuccessful immediate management

- Refer urgently to urologist

Immediate Management

- Paraphimosis

- Complications
  - Failure to remove the constricting band of paraphimosis will result in necrosis of the glans

- Risk factors

- Management

- Consideration of circumcision

- Successful reduction in swelling
  - As the foreskin continues to develop normally after reduction, circumcision should not be necessary.
  - If dorsal incision is required, circumcision is sometimes advocated.

Foreskin Problems, Paraphimosis & Phimosis & Circumcision

Link to guidance: http://www.enhertsccg.nhs.uk/bedfordshire-and-hertfordshire-priorities-forum
Balanitis
The inflammation of the glans penis. If the foreskin is also inflamed, the correct term is balanoposthitis, although balanitis is commonly used to refer to both.

Aetiology
- Infection with candida is the most common cause seen in general practice.
- Bacterial cases may be polymicrobial.

Infection
- Candida spp.
- Staphylococci/streptococci (especially Group B)
- Anaerobes
- Gardnerella vaginalis
- Trichomonas spp.
- Entamoeba histolytica (can cause severe oedema and rupture of foreskin)
- Borrelia vincentii
- Treponema pallidum (syphilis)
- Viral - e.g., herpes simplex, human papillomavirus

Dermatological
- Fixed drug eruption (particularly with sulfonamides and tetracycline)
- Circinate balanitis (may be associated with Reiter's syndrome)
- Balanitis xerotica obliterans/lichen sclerosus
- Zoon's balanitis (plasma cell infiltration); a benign, idiopathic condition presenting as a solitary, smooth, shiny, red-orange plaque of the glans and prepuce of a middle-aged to older man
- Queyrat's erythroplasia (penile Bowen's disease - carcinoma in situ)
- Psoriasis
- Lichen planus
- Leukoplakia
- Seborrhoeic dermatitis
- Pemphigus
- Pemphigoid

Miscellaneous
- Irritation or contact dermatitis: wet nappies, poor hygiene, smegma, soap, condoms
- Trauma: zippers, accidental or inappropriate foreskin retraction by a child/parent
- Stevens-Johnson syndrome
- Severe oedema due to right heart failure
- Morbid obesity

Presentation
- Sore, inflamed and swollen glans/foreskin
- Non-retractile foreskin/phimosis
- Penile ulceration
- Penile plaques
- Satellite lesions
- May be purulent and/or foul-smelling discharge (most common with streptococcal/anaerobic infection)
- Dysuria
- Interference with urinary flow in severe cases
- Obscuration of glans/external urethral meatus
- Impotence or pain during coitus
- Regional lymphadenopathy

Complications
Difficulty retracting the foreskin may develop. This is more likely if the balanitis is chronic or recurring.
Risk factors

- The most important risk factor is diabetes mellitus
- Use of oral antibiotics
- Poor hygiene in uncircumcised males
- Immunosuppression
- Chemical or physical irritation of glans
**Balanitis Management**

- Local hygiene
- Warm bath with dilute saline (four tablespoons or so in a bath) - dry penis well afterwards. This will improve symptoms regardless of cause until therapy works
- If an STI is suspected, any partner(s) should be screened. Specialist advice should be sought or the patient referred to a GUM clinic, depending on the expertise of the GP and the clinical scenario
- If a dermatological cause is suspected then treat the underlying cause with advice from dermatology/GUM/urology
**Balanitis Treatment**

- Systemic therapy should be considered if there is severe inflammation affecting the penile shaft, or marked genital oedema.

- If candidal infection is the suspected cause:
  - Recommended regimens: clotrimazole cream 1% or miconazole cream 2%; apply twice daily until symptoms have settled.
  - Alternative regimens: fluconazole 150 mg stat orally if symptoms are severe.
  - Topical imidazole with 1% hydrocortisone if there is marked inflammation.
  - There is a high rate of candidal infection in sexual partners, who should be offered screening.

- If bacterial infection is suspected:
  - Take a swab and await the results or consider GUM referral.
  - Common bacterial infection can usually be treated with flucloxacillin or erythromycin in penicillin-allergic patients.
  - Anaerobic infection:
    - Recommended regimen: metronidazole 400 mg twice-daily for one week.
    - Alternative regimens: co-amoxiclav 375 mg three times daily for one week; clindamycin cream applied twice-daily until the infection has resolved.

- If there is gross inflammation and the patient is systemically unwell, consider admission to hospital for IV antimicrobials.
Phimosis

Almost all boys have a non-retractile foreskin at birth. The inner foreskin is attached to the glans. Foreskin adhesions break down and form smegma pearls which are then extruded. The foreskin does not retract before the age of 2 years. The process of retractility is spontaneous and does not require manipulation. Phimosis is not a problem unless it causes difficulties such as urinary obstruction, haematuria or local pain. The condition of pathological phimosis is also recognised. This usually results from episodes of foreskin infection (balanoposthitis). A vicious cycle is set up in which repeated attacks of infection lead to scarring which results in further infections.

- The majority of boys will have a retractile foreskin by 10 years of age and 95% by 16-17 years of age. Phimosis can subsequently occur at any age
- Phimosis results when the prepuce is tight and is unable to be pulled forward over the glans. This is often the result of chronic infection caused by poor hygiene
- Poor hygiene and enthusiastic attempts to correct congenital phimosis increase the risk of developing pathological phimosis
- Phimosis usually occurs in uncircumcised males but can occur after circumcision where any excessive skin becomes sclerotic
- In older diabetic patients it often results from chronic balanoposthitis that is inflammation of the glans and prepuce
- The incidence of phimosis is 8% in 6- to 7-year-olds decreasing to 1% in males aged 16-18 years

In physiological phimosis, parents may bring their son in for consultation, concerned that his foreskin may not yet be retracting. They may have noticed the naturally occurring adhesions or may be anxious about ballooning during micturition. Problems relating to physiological phimosis may include recurrent balanoposthitis and recurrent urinary tract infections.

Pathological phimosis may present as painful erections, haematuria, recurrent urinary tract infections, preputial pain and weak urinary stream.

There may be swelling redness and tenderness of the prepuce with purulent discharge. Adhesions may be seen between the inner surface of the prepuce and the glans or the frenulum. The frenulum itself may be shortened and retraction of the foreskin may lead to ventral distortion of the glans. In physiological phimosis the meatus will appear healthy and unscarred. In pathological phimosis the meatus may appear scarred, with a fibrous white ring forming around the preputial orifice.
Phimosis Management

Various guidelines have been issued concerning the management of phimosis. From a primary care point of view, the approach should be to find out why the patient has presented at this time and what problems the condition is causing. Both patient and parental expectations should be explored and the options explained.

- If the issue is a non-retractile foreskin and/or ballooning during micturition in a child under two, an expectant approach should be taken in case this is physiological phimosis which will resolve in time.
- Avoid forcible retraction of a congenital phimosis, as this can result in scar formation and an acquired phimosis.
- Personal hygiene is very important. Advise cleaning under a retractable foreskin and always reduce it to cover the glans after cleaning.
- Topical steroid application to the preputial ring to treat 'phimosis' has reported success rates between 33-95%.
- Phimosis persisting after the age of 2 years may be considered for further treatment, particularly if recurrent balanoposthitis or urinary tract infections are occurring. The options are plastic surgery or circumcision.
Paraphimosis

Occurs when a tight prepuce is retracted and then unable to be replaced as the glans swells. This is a urological emergency. Always check there is no encircling foreign body constricting venous return, such as a ring, rubber band or hair.

Presentation

- There is oedema around the constricting band that is usually the prepuce.
- There may be pain on erection.
- Infants may present just with irritability.
- A carer may discover the condition incidentally in a debilitated patient.
- In later stages, the glans may develop a blue or black colour due to necrosis.
Risk factors of paraphimosis

- A tight prepuce causes swelling when it is retracted. This may occur after failing to pull the foreskin forward to its natural position after cleaning or catheterisation.
- Scarring of the prepuce after repeated forcible retraction in an attempt to 'cure' a physiological phimosis.
- Vigorous sexual activity.
- Chronic balanoposthitis (typically in patients with diabetes).
- Penile piercing can lead to paraphimosis but the most common cause is urinary catheterisation when, after inserting the catheter, there is failure to replace the foreskin over the glans after the procedure.
Immediate management of paraphimosis

- Gentle compression with a saline-soaked swab followed by reduction of the prepuce over the glans is usually successful.
- Gradual manual reduction of the prepuce over the glans is done by placing both index fingers on the dorsal border of the penis and thumbs on the glans. The glans is pushed back while the index fingers pull the prepuce back over the glans.
- This technique can be facilitated by trying to achieve reduction of swelling first. Ice may be applied. Manual compression is achieved by asking the patient to squeeze the glans for anything from 5 to 30 minutes. Osmotic reduction involves application of a swab soaked in 50% dextrose to the swollen area for an hour.
- If simple methods fail then refer urgently to an urologist.
- Alternatives include multiple punctures in the oedematous foreskin or injection of hyaluronidase prior to compression reduction.
- General anaesthesia may be required.
- If local anaesthetic is required it must not contain adrenaline (epinephrine).
- Dorsal incision is occasionally required.
- There is no consensus regarding circumcision after paraphimosis. Some authorities maintain that since the foreskin continues to develop normally after reduction this should not be necessary. However, if dorsal incision is required, circumcision is sometimes advocated.
**Circumcision**

Conservative management is preferable for all other common conditions of the foreskin, including physiological phimosis, paraphimosis, balanitis, posthitis, and hooded foreskin.

Patients with minimal or moderate symptoms should not be referred for circumcision.

**The indications for circumcision are:**

- pathological phimosis, with permanent scaring of the preputial orifice
- severe recurrent balanitis/balonoposthitis
- exceptionally, recurrent febrile urinary tract infections in children with abnormal urinary tracts

There may be other functional indications, these need to be approved on a case by case basis through local IFR departments.

Referral can also be made for investigation e.g. possible abnormal urinary tracts, recurrent UTIs in children.
**Prognosis**

Depends on underlying cause and the presence of any predisposing risk factors. Candidal balanitis resolves rapidly with appropriate treatment but is more likely to recur in men with:

- Diabetes mellitus
- Poor genital hygiene
- Phimosis

Balanitis due to contact irritants resolves over a period of days with removal of the provoking irritant or allergen. It may recur if exposed again.