

THE PENIS Foreskin disorders and circumcision

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Surgical referrals for foreskin problems are common in early childhood, and reassurance is often all that is needed after taking a careful history and examination. The foreskin, or prepuce, is a highly innervated, double-layered fold of skin. The inner layer is a mucous membrane and the outer layer is skin, with a mucocutaneous zone where the layers meet. The prepuce has similarities to the eyelids, labia minora, anus and lips. The prepuce provides mucosa and skin to cover the erect penis. The foreskin is adherent to the glans at birth and gradually separates in most boys by the age of 5 years and in the remaining before puberty, allowing the foreskin to become - fully retractile. Forceful retraction is not recommended as it can cause tears and scarring. The adhesions are natural and not pathological. The foreskin may balloon on micturition as the plane between glans and prepuce develops. Ballooning is not an indication for circumcision. If spraying of urine on micturition is causing concern, the parent and child can be taught to partially draw back the foreskin so the meatus is unobstructed and spraying is reduced. Occasionally a nodule of entrapped smegma, termed a 'smegma pearl', accumulates in the developing plane between the glans and prepuce, causing parental anxiety. These are harmless collections that discharge on their own when the developing plane finally opens onto the exposed glans. The most common surgical procedure and is usually performed for cultural reasons. About 40% of males worldwide are circumcised. Circumcision is performed in Judaism, on day 8 of life (brit milah), and in Islam (khitan), at varying ages. In early infancy, circumcision can be performed under local anaesthesia using simple devices like the PlastiBell or Gomco clamp. In older boys under general anaesthesia, the foreskin is removed with a blade or scissors, followed by attention to haemostasis and skin apposition with sutures or glue. Complications include bleeding, dehiscence, infection, cicatrix, adhesion formation, meatal stenosis, the removal of too little or too much tissue, cosmetic concerns and rarely urethral injury or amputation. Medical indications for circumcision include:

- True phimosis: the foreskin is non-retractile because of a tight fibrotic preputial ring.
- Balanitis xerotica obliterans (BXO): a chronic, possibly autoimmune, preputial inflammation that may also affect the distal urethra and is rarely seen before 5 years of age. Boys present with progressive phimosis and white, hard preputial skin (Figure 20.1), dysuria and ballooning on micturition. Usually, circumcision is required, although some boys respond to topical corticosteroids. Follow-up is required to exclude meatal stenosis.
- Recurrent balanoposthitis: an inflammation of the glans penis and its retractile foreskin due to infection, irritation or trauma. Boys may present with pain, itching, rash, dysuria and a non-urethral penile discharge. Most boys have only one or two episodes and need no intervention, but a few have sufficient trouble with recurrence that circumcision is indicated.
- Recurrent urinary tract infections (UTIs) though rare in most boys, UTIs are a particular risk with some anomalies, such as posterior urethral valves, where renal insufficiency. In these

boys, circumcision may reduce - those risks. Paraphimosis : sometimes, the prepuce retracts back over the glans and cannot be brought forward again; the glans swells and becomes painful. If manipulation fails, an emergency dorsal slit or circumcision is indicated.

Figure 20.1 Balanitis xerotica obliterans.

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