A young boy with dysuria and penile pain

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Test your diagnostic skills in our regular dermatology quiz. What is the cause of this boy's symptoms and how should they be managed?

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Figure. The eroded patch under the patient's foreskin.

CASE PRESENTATION

An 18-month-old boy presents after experiencing dysuria and penile pain for the last 24 hours. He is no longer wearing nappies during the day and he has previously been well.

On retraction of the foreskin, a red, eroded patch of skin is exposed (Figure).

DIFFERENTIAL DIAGNOSIS

Conditions to consider in the differential diagnosis include the following.

- **Candidiasis.** Genital *Candida* infection is unusual in children who are no longer wearing nappies but it can occur, particularly after ingestion of antibiotics. It would be unlikely in this case.
- **Fixed drug eruption.** It is quite common for fixed drug eruptions to occur on the penis. This is often a diagnostic dilemma because some of the medications that cause these eruptions are available over the counter, such as ibuprofen and paracetamol, which patients tend not to mention and doctors tend not to enquire about. In children, sulfa-containing antibiotics are another common cause. Fixed drug eruptions affecting the genital area often have an erosive appearance and (unlike on other areas of skin) are rarely hyperpigmented. They occur within a short period of time (within a day) after ingesting the medication.
- **Allergic contact dermatitis.** Many applied substances, including baby wipes, moisturisers and over-the-counter antifungal agents, can cause a contact dermatitis, which tends to be very itchy. It would only be suspected in this case if there was a history of contact with a possible allergen applied under the foreskin.
- **Psoriasis.** Psoriasis commonly affects the genital area. However, it more frequently presents with itchy or asymptomatic scaly plaques on the shaft of the penis rather than as an acute balanitis.
- **Streptococcal balanitis.** This is the correct diagnosis. In prepubertal children (both girls and boys), the most common cause of all genital infections is group A β-haemolytic streptococcus. The portal of entry is the oropharynx. Boys present with an acute balanitis and girls with vulvovaginitis. These bacteria may also cause a chronic perianal infection that presents with a persistent erythematous, weeping eruption that causes pain on defaecation.

DIAGNOSIS AND MANAGEMENT

To confirm the diagnosis in the case described above, a careful history should be taken to rule out exposure to possible allergens, including over-the-counter medications and applied topical therapies. A swab should be taken and sent for culture, and *Streptococcus* and *Candida albicans* will usually be found.

For a child in the prepubertal age group, which is prone to bacterial genital infections, streptococcal balanitis is best treated with penicillin (or erythromycin if the child is allergic to penicillin). The course of antibiotic treatment should be strictly continued for 10 days because relapse may occur with a shorter course. Concurrent application of topical mupirocin twice daily will reduce infectivity. MT

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