Contact dermatitis masquerading as fixed drug eruption: making a critical distinction

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DESCRIPTION

A 43-year-old man presented to the sexual health clinic with a 24-hour history of an erythematous, pruritic rash on the uncircumcised glans of the penis with no associated genitourinary, dermatological or systemic symptoms. His rash appeared 3 days after taking doxycycline for the treatment of asymptomatic rectal chlamydia infection. There were no previous skin changes with doxycycline or other medications. On specific questioning, the patient reported applying alcohol-based hand sanitiser on the penis 1 hour prior to symptom onset. His last sexual activity included condom-less receptive anal intercourse plus receptive and insertive oral intercourse with a casual male partner 3 months before presentation. He reported no recent sex overseas. Medical history included well-controlled HIV (serially undetectable viral load on antiretroviral therapy with abacavir, lamivudine and dolutegravir) and past treated syphilis. He reported no known allergies. Examination revealed a marked erosive balanitis to the glans with a well-defined 2 cm×2 cm desquamated area with sloughy exudate (figure 1). There was no associated inguinal lymphadenopathy, and his oral cavity and skin elsewhere were unremarkable. Key differential diagnoses considered included infections (eg, herpes simplex virus (HSV) or *Treponema pallidum*), a fixed drug eruption caused by doxycycline or contact dermatitis secondary to alcohol-based hand sanitiser. Nucleic acid amplification testing of HSV and *T. pallidum* DNA returned negative and there was no evidence of syphilis infection on serology.

Fixed drug eruptions typically develop within 30 min to 8 hours of taking the offending drug but may occur up to an average of 2 days after exposure.[1 2] While doxycycline may be a common culprit, there is frequently a history of similar reactions with the same drug.[3] Our patient had neither of these features on history, and contact dermatitis was considered far more likely given the timeline of symptom onset and the irritant/trigger. While re-challenge and/or patch testing has been discussed and advocated in some settings for those with suspected fixed drug eruptions, we performed no further testing on our patient.[4] The patient was advised to stop the use of any chemical irritants on the genital skin and advised on genital hygiene. With these simple measures, symptoms improved markedly within 3 days. It has been recognised that antimicrobial stewardship involves clinicians avoiding or reducing instances of inappropriate 'labelling' (eg, of allergies and adverse drug reactions) that can limit treatment options.[5 6]

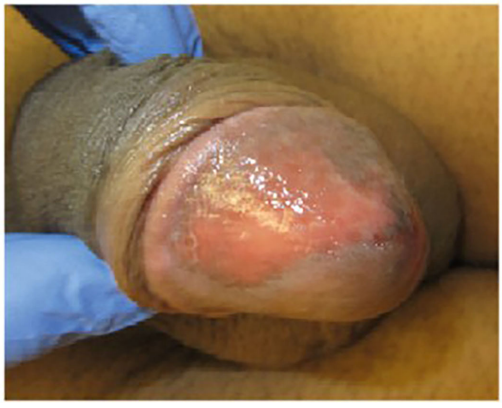

Figure 1 Marked erosive balanitis to the glans of the penis with a well-defined 2 cm×2 cm desquamated area with sloughy exudate caused by chemical irritant; the appearance could be mistaken for a fixed drug eruption.

Our case serves as a reminder of the importance of careful history taking when patients present with genital skin changes to reach the diagnosis and instigate appropriate management. Obtaining a specific history of irritants to the genitals (in this case, recent chemical exposure) allows clinicians to avoid the misdiagnosis of a fixed drug eruption, a diagnosis with implications for antimicrobial therapy in an era of increasing antimicrobial resistance.

Learning points

- Fixed drug eruption, sexually acquired genital ulceration and contact dermatitis can mimic one another clinically.
- Contact dermatitis should remain in the differential diagnosis in all patients presenting with genital rash.
- Careful history taking can help prevent the misdiagnosis of fixed drug eruption which can limit treatment options for sexually transmitted infections in an era of increasing antimicrobial resistance.

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