

FIXED DRUG ERUPTION ASSOCIATED WITH DOXYCYCLINE: A RETROSPECTIVE CASE SERIES AND A CHALLENGE-CONFIRMED CASE REPORT WITH IMPLICATIONS FOR DOXYCYCLINE POST-EXPOSURE PROPHYLAXIS IN STI PREVENTION

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Background:

Doxycycline use has increased in the sexual health setting, following changes in chlamydia treatment guidelines and the introduction of doxycycline post-exposure prophylaxis (doxyPEP). Fixed Drug Eruptions (FDEs) are a recognised but uncommon adverse reaction to doxycycline. Genital presentations in particular may resemble sexually transmitted infections, which can complicate diagnosis.

Methods:

We conducted a retrospective case series of doxycycline-induced FDE at Melbourne Sexual Health Centre from January 2023 to December 2025. Cases were identified through a clinical audit with documented diagnoses of FDE or doxycycline-related allergy/serious drug event. One MSM client taking both HIV PrEP and doxyPEP reported two episodes of genital ulceration consistent with a suspected doxycycline-induced FDE. To confirm the diagnosis, the client underwent a supervised 100mg doxycycline challenge in August 2025.

Results:

A total of 53 cases (52 males and 1 female) of doxycycline-induced FDE were reported. The median age was 35 years (IQR 30-39) and the majority reported (90.2%, 46/51) genital symptoms with common features including cutaneous reactions (ulcer, lesion, skin peeling and blistering) (84.7%, 39/46). Of the males, most (94.2%, 49/52) were men who have sex with men (MSM). Among the 49 MSM, 75.5% (37/49) were taking HIV PrEP and 10.2% (5/49) reported using doxyPEP.

The client who underwent 100mg doxycycline challenge was confirmed to have doxycycline-induced FDE. He developed penile symptoms, including swelling and

redness to his foreskin, within 22 hours of ingestion. He was subsequently reviewed by the clinic dermatologist, who confirmed the diagnosis. Clinical management included oral antihistamine and a topical corticosteroid.

Conclusion:

Doxycycline-induced FDEs are an important and likely under-recognised adverse effect in sexual health settings, particularly in MSM. Increased doxycycline use and repeated exposure (e.g. doxyPEP) may increase the risk of FDE. Greater clinician and community awareness are needed to differentiate FDE from STI and to avoid misdiagnosis and inappropriate management.

Disclosure of Interest Statement:

No disclosure of interest.