CASE REPORT

# FIXED DRUG ERUPTION DUE TO FLUCONAZOLE: A CASE REPORT

Fluconazole is commonly used in treatment of candidiasis and dermatophyte infections. Fluconazole-induced fixed drug eruption (FDE) is one of the rare adverse cutaneous drug reactions reported in literature. We report a case of a 23-year-old man who developed FDE after intake of fluconazole, which resolved after the drug was discontinued. Thus, for safe use of medicines, continued reporting of such rare adverse effects of drugs is required.

**Key Words:** Fluconazole; Adverse Cutaneous Drug Reaction; Fixed Drug Eruption

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## INTRODUCTION

Fixed drug eruption (FDE) is an adverse cutaneous drug reaction that recurs at the same site of the skin or mucous membrane after repeated exposure to the offending drug.[1] FDE occurs usually from 30 minutes to 8 hours after the exposure to the drug, sometimes even after 16 hours.[2] The lesions usually appear on the extremities, perianal area, and genital and oral mucous membranes.[3] Fluconazole is a triazole antifungal agent commonly used in the treatment of dermatophytic and candidal infections with side effects such as nausea and liver enzyme elevations. Along with the most common cutaneous adverse effect skin rash, severe cutaneous reactions such as Stevens–Johnson syndrome, acute generalized exanthematous pustulosis, toxic epidermal necrolysis, and erythema multiforme are also observed. We report here a rare case of an FDE resulting from repeated administration of fluconazole in the treatment of tinea cruris.

## CASE REPORT

A 23-year-old man was diagnosed with tinea cruris and was prescribed fluconazole 150 mg once a week. He took medication at night and developed lesions over right forearm (Figure 1), lips (Figure 2), and glans penis (Figure 3) within 10–12 hours, accompanied by burning sensation and itching. The patient did not have history of concomitant medication. But he had a history of similar lesions appearing twice over right forearm and lips due to the same medication prescribed for the treatment of tinea cruris (1 and 3 years ago, respectively), which was not revealed to the dermatologist during consultation. He was not having any other comorbid condition. On examination, a well-defined hyperpigmented patch with surrounding erythema, approximately 3 × 4 cm in diameter over the right forearm (Figure 1); two bullous lesions over the upper lip, with a few vesicles over both the lips (Figure 2); and an erosion over glans penis (Figure 3) with more severity were observed.

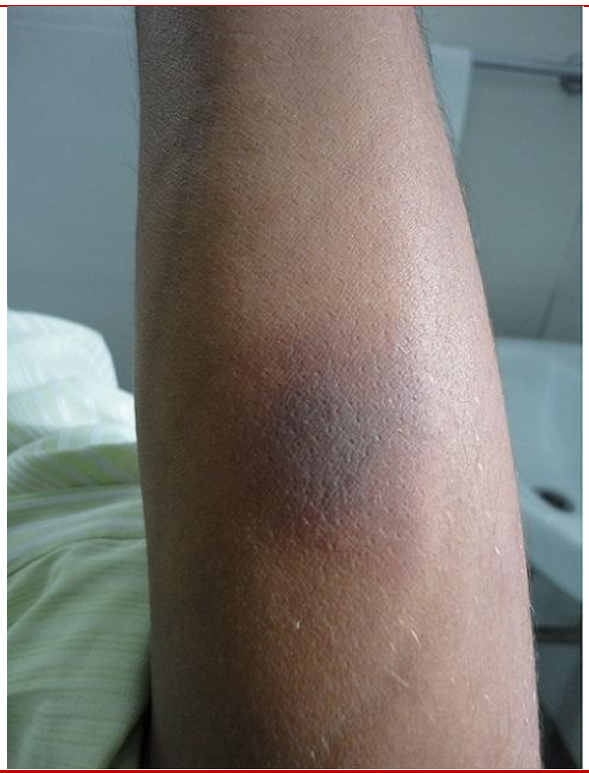

**Figure-1: A well-defined hyperpigmented patch with surrounding erythema, approximately 3-4 cm in diameter over the right forearm**

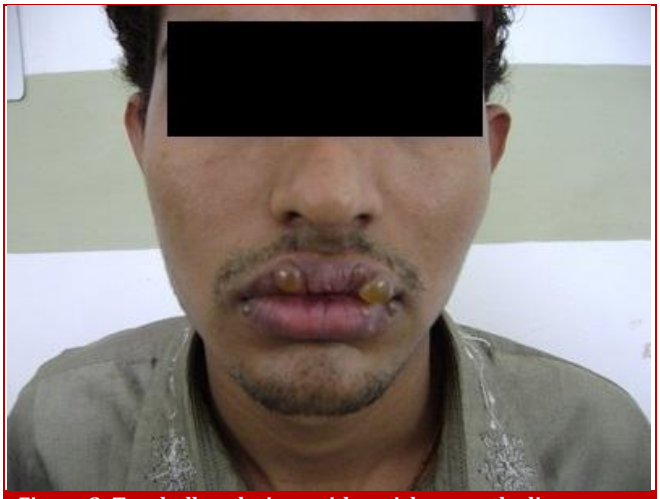

Figure-2: Two bullous lesions with vesicles over the lips

Figure-3: Erosion with surrounding erythema over glans penis

The absolute eosinophil count of the patient was found to be 135 (cells/μL). The values of other routine hematological and biochemical investigations were also within the normal range. The serology test result for human immunodeficiency virus was negative. On all the three sites, the lesions improved after fluconazole was discontinued. The lesions improved within 5 days after discontinuation of fluconazole, with residual hyperpigmentation without any complaint. Itching and burning sensation were treated with oral antihistamines [tab Levocet (5 mg) and tab Atarax (25 mg)] and topical antibiotic (Soframycin cream). A warning drug list was given to the patient to avoid further exposure to drugs likely causing FDE including fluconazole.

## DISCUSSION

FDE was first described by Bourns in 1889; 5 years later, it was termed "eruption erythemato-pigmentee fixe" by Brocq.[5] It accounts for approximately 16% of all cutaneous drug eruptions.[6] It is a delayed-type hypersensitivity reaction[3] mediated by CD8+ T cells, which occurs when patients become sensitized to a particular drug or its metabolites. It is characterized by the onset of single or multiple, sharply demarcated, erythematous macules and patches with or without blistering, resulting in residual post-inflammatory pigmentation.[3] It characteristically recurs at the same sites after repeated administration of the causative drug.[7] The recurrence is usually within 30 minutes to 16 hours after the exposure to the drug, accompanied by pruritus and burning. The lesions remain quiescent until reexposure of the causative agent. The most common sites are the hands, feet, genitalia, oral mucosa, and perineal area. The drugs mostly reported to cause FDE are cotrimoxazole, tetracycline, nonsteroidal anti-inflammatory drugs, metronidazole, penicillin, allopurinol, sulfonamide, and quinine.[8] Fluconazole is one of the most common drugs used in dermatological and gynecological practice. It is a relatively safe triazole antifungal agent widely used for treating fungal infections.[9] However, FDE could be one of the rare side effects of fluconazole. In our case, the association is "definite" and "certain" per the Naranjo Scale and the WHO–UMC causality assessment system, respectively. ADR severity assessment according to the Modified Hartwig and Siegel scale (1992) showed that our case is in level 2 moderate category. According to the Modified Schumock and Thornton criteria (1991), used for determining preventability of an ADR, our case is definitely preventable**.** FDE may not be correctly diagnosed or treated because many doctors are not aware of this rare side effect of fluconazole.[5] If untreated, the patient can face grave consequences such as Stevens–Johnson syndrome and toxic epidermal necrolysis.[4] In our case, fluconazole was prescribed by different consultants at all the three occasions. Above all, the patient neither told nor he was asked regarding drug sensitivity history. On our detailed interrogation, the history of drug reaction with the same drug—fluconazole—was revealed. To our knowledge, approximately 14 such cases have been reported till date.[11]

## CONCLUSION

Herein we report an uncommon adverse drug reaction due to commonly used antifungal drug fluconazole, which is used for the treatment of dermatophyte infections and candidiasis. Although fluconazole-induced FDE is rare, physicians should keep it in mind while prescribing this commonly used drug. By detailed interrogation of the patients' history, consultants can reveal such type of

events and take appropriate therapeutic decisions for their safety.

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