

Ornidazole-induced fixed drug eruption: A case report

Fiksni medikamentozni eksantem, ki ga
izzove ornidazol: Prikaz primera

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Abstract

Fixed Drug Eruption (FDE) is characterized with skin lesions in the instant of offending drug. It recurs at the same site of the skin or mucous membrane. In our case, 26-year-old female patient was admitted to our emergency department with distinctive and itchy skin lesions after ornidazole administration. Physical examination revealed erythematous, hyperpigmented and desquamate, non-bullous and well-defined plaque lesions. She had similar medical history with ornidazole use. Histopathological examination with biopsy was performed. The patient's skin lesions and irritation symptoms have gradually improved with discontinuation of ornidazole, and administering topical and systematic anti-histaminic and steroid therapy.

In conclusion, the physician should perform a detailed enquiry for patient's anamnesis. The offending drug should be discontinued And the patient should be informed about the offending drug.

Izvleček

Za fiksni medikamentozni eksantem (FDE) so značilne kožne lezije, ki se pojavijo v povezavi z določenim zdravilom. Reakcija se ponavlja na istem mestu na koži ali sluznici. Prikazan je primer 26-letne bolnice, ki smo jo sprejeli na naš urgentni oddelek zaradi močno izraženih srbečih kožnih lezij po aplikaciji ornidazola. Fizični pregled je pokazal eritematozne, hiperpigmentirane, luskaste in dobro razmejene plake brez mehurjev. V preteklosti je že imela podobno izkušnjo z uporabo ornidazola. Opravljen je bil histopatološki pregled z biopsijo. Po ukinitvi ornidazola in uvedbi lokalne in sistemske terapije z antihistaminiki in steroidnimi zdravili je pri bolnici prišlo do postopnega zmanjšanja kožnih lezij in znakov vnetja.

Zaključujemo, da je pomembno, da zdravnik podrobno preuči bolnikovo anamnezo. Škodljivo zdravilo je treba opustiti in bolnika obvestiti o škodljivosti zdravila.

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Introduction

Fixed drug eruption (FDE) is a skin reaction to a drug even when used within normal doses. It is a distinctive variant of drug-induced recurrent dermatosis at the same site of the skin or mucous membrane.¹ It is characterized with appearance of a skin lesion in the instant of drug administration. Among anti-protozoal drugs, metronidazole and tinidazole have been reported along with cross-sensitivity to each other to cause FDE.² FDE is a cutaneous disorder characterized with single or multiple erythematous, hyperpigmented, edematous and curricle plaques. Commonly involved areas of the body are lips, hands, trunk and genitals. Of these areas, genital and oral mucosa are the most common.³ The gold standard in the diagnosis of FDE is recurrence of skin lesions in the same site of a previous involvement whenever the offending drug is taken. First-line treatment for FDE is discontinuation of the causative drug. Treatment otherwise is symptomatic. Systemic antihistamines and topical corticosteroids may be all that is required, and in cases where an infection is suspected, antibiotics and proper wound care are advised. FDE due to metronidazole and tinidazole were commonly reported, but only one case of FDE due to ornidazole was reported. To the best of our knowledge, there was only a single case of FDE caused by ornidazole reported in the literature.⁴ Therefore, our case was the second one.



Figure 1: Erythematous, hyperpigmented and desquamative, non-bullous, peeling, and well-defined plaque lesions 3x4 cm and 3x3 cm of size in the middle and posterior axillary line of the trunk.

Case Report

A 26-year-old female patient was admitted to our emergency department with itchy rashes. The present lesion started as multiple erythematous, slightly painful, itchy, and well defined skin rash occurring in the trunk and upper arm within 30–60 minutes after ingesting ornidazole prescribed for urinary tract infection. There was no history of insect bite at that site. On further enquiry, the patient turned out to be a previously diagnosed case of recurrent skin lesion at similar site following ingestion of oral ornidazole. The previous lesion healed spontaneously without any treatment after discontinuing ornidazole. On a detailed dermatologic examination, erythematous, hyperpigmented and desquamative, non-bullous, peeling, and well-defined plaque lesions measuring 3x4 cm and 3x3 cm in the middle and posterior axillary line of the trunk and 1x1 cm in the upper left arm were observed. The lesions were itchy in nature (Fig. 1). The tests for sedimentation, liver, kidney, thyroid function, and hemogram were normal. The histopathological evaluation of the lesion sample taken from the axillary region revealed that there was focal basal spongiosis, mild exocytosis of lymphocytes and a perivascular infiltrate of lymphocytes in the upper dermis (Fig. 2) (H&Ex40).

Provisional diagnosis of FDE was made, taking into account previous history of FDE induced by ornidazole, histopathological findings and clinical signs. The causative drug, ornidazole was discontinued and cetirizine 10 mg/day and prednisolone 16 mg/day was administered. The lesions and symptoms improved gradually within 3 days. Systemic steroid therapy was then gradually tapered and discontinued shortly thereafter.

Discussion

FDE occurs each time a particular drug is taken by an individual and a skin reaction appears in the same site of the body. The rash is very itchy or sometimes may burn at first, it will then erupt as a raised dusky, red or purple-tinged patch of skin (plaque), some blistering may also occur. These skin

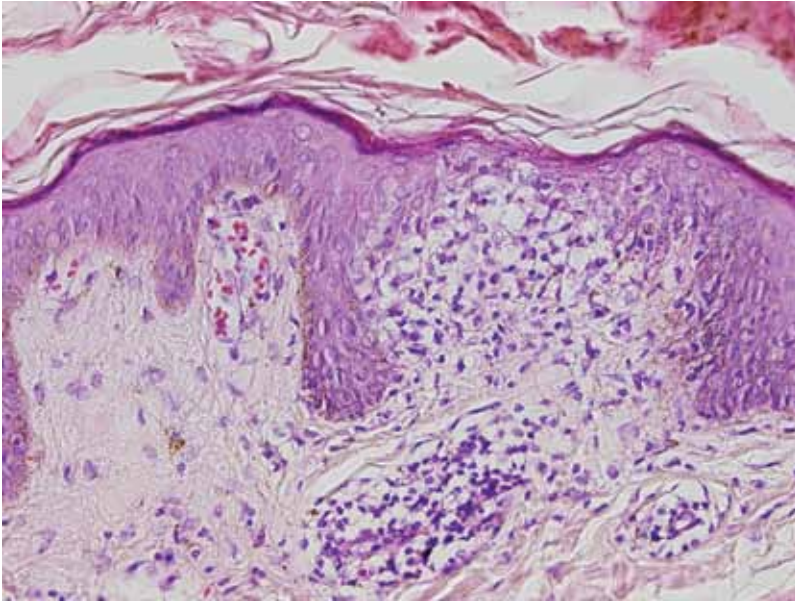


Figure 2: Focal basal spongiosis, mild exocytosis of lymphocytes and a perivascular infiltration of lymphocytes in the upper dermis (H&Ex40).

reactions usually arise on the hands, feet, lips or genitalia. It is difficult to predict the course of FDE. It may cause a simple skin rash or severe forms of skin reaction, epidermal toxic necrolysis, and it may threaten human life. FDE can be caused by metronidazole and tinidazole with cross sensitivity to each other.⁵ Metronidazole, tinidazole and ornidazole are chemically related nitroimidazole derivatives. Cross-sensitivity among these drugs can be explained on the basis of some antigenic relationships between them or their metabolites.

Vila, Naik and Jafferany et al. also reported cases of FDE due to metronidazole or imidazole in their case reports, separately. Shalley et al. reported a case of FDE caused by metronidazole, in which a 37-year-old woman was examined for a large, dark brown plaque on her left hip that had been present previously. Every four to five months the areas became swollen, red, and painful. She had been taking metronidazole intermittently for twenty years for the treatment of trichomoniasis; this drug on challenge proved to be the cause of the eruption.⁶⁻⁹

Gupta et al. reported a case of FDE induced by ornidazole. In their case, a 26-year-old male presented with well-defined bullous erosion situated over the right side of his lower lip mucosa. As to the site of lesion, it is different from the site of lesion in our case. They performed topical and oral provocation test.⁴

In FDE, a topical or systemic provocation test is important to confirm diagnosis. Topical provocation test is performed with lesion patch applied to a previously involved skin area. Oral provocation test with offending agents or drugs should be undertaken in case where lesion patch test is negative.⁹ In our case, we did not perform any topical or systemic oral provocation test with ornidazole, because our patient's previous and current medical history along with clinical signs was enough to diagnose FDE caused by ornidazole. Moreover, lip and genital skin involvements were not observed in our case although these sites are the most common sites involved in FDE.⁵ As mentioned above, it is almost impossible to predict which drug would induce FDE and its course. Well structured and detailed current and previous medical history taking and careful physical examination are sufficient for FDE diagnosing. Therefore, physician should perform detailed enquiry into the patient's history. This is a rational approach to patients' treatment and further quality of their life. The main goal of treatment is to identify the drugs that are giving the patient these reactions and avoid them. The offending drug must be discontinued. To conclude: 1) Perform a detailed enquiry into patient's current and previous medical history. 2) Ornidazole should be taken into consideration and added to the list of drugs causing FDE. 3) Consider cross-sensitivity with other drugs of the same class, although all drugs are not always present; hence others can be prescribed.

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