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Case Report
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Fixed Drug Eruption due to Ornidazole

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Abstract

Ornidazole is a nitroimidazole derivative with, anti-trichomoniasis and anti-parasitic properties. Fixed drug eruption (FDE) is a common cutaneous reaction by various drugs. FDE induced by ornidazole has been reported as 4rd case in English literature. We describe a 40-year-old male patient with ornidazole associated FDE shortly after starting ornidazole therapy for gastroenteritis. Ornidazole therapy was stopped and the patient was treated with topical corticosteroids and systemic antihistamines. The eruption resolved within five days. The rash returned following ornidazole rechallenge. We propose that FDE is a side-effect of ornidazole.

Introduction

Fixed drug eruption (FDE) is a pattern of skin reaction caused by various drugs, e.g. acetylsalicylic acid, pyrazolones and tetracyclines. The incidence of FDE caused by a specific drug depends on the frequency of its use [**1**]. Ornidazole (Biteral®) synthetic nitroimidazole derivative, is used in the treatment of infections caused by anaerobic bacteria and protozoa. It has been used for the treatment of intestinal amoebiasis [**2**]. Dermatological side-effects, including urticarial and morbilliform rashes have been reported with this drug [**3**]. FDE can be caused by a wide spectrum of drugs such as phenazon derivatives, barbiturates, antibiotics, chemotherapeutic drugs, and psychotropic drugs [**4, 5, 6, 7, 8, 9**].

FDE induced by ornidazole has been reported three times [**10, 11, 12**]. We describe a patient with FDE shortly after starting ornidazole therapy for diarrhoea.

Case Report

A 40-year-old male patient presented with a 5 days history of erythematous to violaceous plaque on the upper part of the back. The lesions were sharply demarcated and moderately pruritic (**Figure 1**). He was treated for amoebiasis with ornidazole 500mg/day orally, of 5 days duration. He had a negative history of any other drug intake.

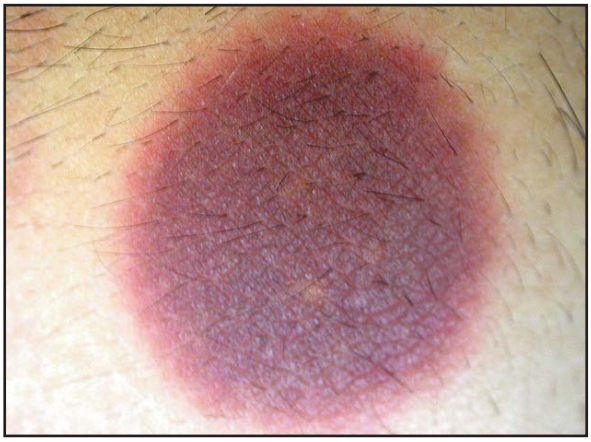

Figure 1. Erythematous plaque located on the back

The result of routine complete blood cell count, urinalysis, erythrocyte sedimentation rate, liver and kidney function tests were within normal limits. A skin biopsy specimen obtained from the neck of our patient revealed hydropic degeneration of the basal layer, dyskeratotic keratinocytes with eosinophilic cytoplasm, colliquation necrosis of the epidermis, exocytosis and the dermal mononuclear infiltrates with scattered melanophages.

Ornidazole therapy was stopped and the patient was treated with topical corticosteroids and systemic antihistamines. The eruption resolved within five days. The rash returned following ornidazole rechallenge.

Discussion

FDE is characteristically a well-demarcated erythematous plaque located on the face, genitalia, and extremities that recur in the same site each time the drug is readministered. The histopathology reveals a lichenoid reaction pattern with formation of *Civatte* bodies and melanin incontinence. A lymphocyte-predominant inflammatory infiltrate is seen at the dermoepidermal junction. Subepidermal blisters develop in bullous FDE [**8**]. The exact pathogenesis of FDE is not known. Antibodies, serum factors and cell-mediated immunity have been implicated. Antibody dependent cell-mediated cytotoxicity may play a part in its pathogenesis [**7**]. In many cases, the causative agent is confirmed by patient history; however, in some uncertain cases, oral provocation test or topical testing with the suspected drug could be done [**9**].

To our knowledge, there are 3 cases of FDE associated with ornidazole in the literature [**10, 11, 12**]. In 2005, *Gupta* et al reported a case of bullous FDE caused by ornidazole. They concluded that ornidazole should be added in the list of the drugs causing bullous FDE. They also observed that patch test was not sensitive tool of demonstration of causative agent and cross sensitivity among all drugs was not always present [**10**]. In 2010, *Gupta* et al described a patient with multiple fixed drug eruption caused by ornidazole [**11**]. *Sanmukhani* et al reported a case of FDE caused by ornidazole which showed crosssensitivity to secnidazole but not to metronidazole, tinidazole or satranidazole. They concluded that ornidazole and secnidazole should be added in the list of drugs causing FDEs and provocation tests to find safer, non-reacting drugs of the same group should be done with the utmost care and only when necessary [**12**]. To our knowledge, FDE due ornidazole has not been previously reported in Turkey. FDE, must be kept in mind as rare side effects of ornidazole and all the nitroimidazoles including metronidazole, tinidazole, ornidazole, secnidazole and satranidazole have cross-sensitivity.

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