

Case Report

A case of self-treatment induced oral mucosal fixed drug eruptions associated with use of tinidazole - a case report

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ABSTRACT

Fixed drug eruptions (FDE) is a type of adverse reaction to drugs encountered in medical practice. Skin, glans penis is most common site of involvement. We hereby report a case of fixed drug eruption on oral mucosa due to tinidazole, a nitroimidazole-derivative which the patient had taken as he was suffering from gastro-intestinal distress. Very limited case reports have been found in literature with respect to tinidazole causing FDE.

Keywords: Fixed drug eruption, Tinidazole

INTRODUCTION

Fixed drug eruptions (FDE) are a type of delayed hypersensitivity reaction occurring due to repeated exposure to an offending drug. While oral mucosa is affected along with skin and penis, isolated involvement of oral mucosa is rare.¹ Very limited cases have been reported which mention the association of tinidazole with FDE. Herein, we present a rare side effect of tinidazole in a 32-year-old man who presented with extensive intraoral fixed drug eruptions following self-medication with tinidazole.

CASE REPORT

A 32-year-old man presented with painful, multiple ulcers and a burning sensation on the lips, tongue and palate and inability to swallow for 2 days (Figure 1 and 2). On examination, multiple islands of small ulcers ranging from 1mm to 4 mm were noted over the lips, tongue, mucosa over hard palate, soft palate and uvula with intense burning sensation. The ulcers were multiple, had a necrotic base with erythematous borders. The patient had symptoms of gastrointestinal tract (GI) disturbance and started taking tinidazole 600 mg twice daily 2 days prior on the advice of a friend. He had taken tinidazole one month prior to this

episode and had similar complaints of ulcer and erythema over the lips. However, the severity was mild and it resolved once the patient stopped his medication. There was no history of smoking, drinking. Patient was not taking any other drugs. His lab investigations were normal. Based on the patient's significant medical history followed by physical examination, a provisional diagnosis of FDE due to tinidazole was made. Tinidazole was immediately withdrawn and the patient was treated symptomatically. The patient did not give consent for oral challenge test hence, was not performed. At 1 week follow-up, complete healing of the ulcer was observed with no scarring and the burning sensation had resolved.



Figure 1: Oral mucosal FDE, multiple islands of small ulcers ranging from 1 mm to 4 mm were noted over the tongue, mucosa over hard palate, soft palate and uvula.



Figure 2: Multiple small ulcers over the lips.

DISCUSSION

Fixed drug eruptions are associated with recurrent skin and/or mucosal lesions every time the offending drug is taken. FDE can have multiple presentations. The most common offending drug as per literature is cotrimoxazole.¹ Very limited case reports have been found with FDE associated with tinidazole. However, the association with ornidazole and FDE is well documented.² After extensive literature search very few cases have been reported with FDE restricted only to oral mucosa.³

FDE is a type of drug reaction which is characterized by recurrence of lesion at the same site every time the drug is taken. It usually occurs within half to 8 hours after the drug is taken.⁴ The severity is proportional to the time exposure of the drug and resolves once the offending drug is stopped.

Several hypotheses have been formulated as to the cause of FDE. One of them being CD8+ T cell mediated cytotoxicity which is a type IV hypersensitivity reaction where CD8+ CTLs kill antigen - expressing target cells. The cells get reactivated on repeated exposure.⁵ The causative drug attaches to the basal keratinocytes and acts as haptens which activates CD8+CTLs resulting in release of interferons and cytokines causing disruption of the basal layer and consequent damage.^{2,5}

The clinical presentation varies from individual to individual. They can either present with bullous lesions or aphthous or erythematous crops. Majority of them being bullous/erosive lesions located on the lips and buccal mucosa. They usually involve skin and glans penis. FDE involving solely buccal mucosa is rare. The lesions heal with or without residual pigmentation.⁶ Our patient presented with isolated oral manifestations.

Tinidazole is a 5-nitroimidazole derivative used to treat bacterial and protozoal infections. Mechanism of action would be free radical injury. Tinidazole is metabolized into metronidazole. The nitro group present in the metronidazole reacts with parasite ferredoxin to generate free radicals and thus killing the organism. Side effects include nausea, vomiting, headache, fatigue and/or disulfiram like reaction.⁷ Only few case reports mention about FDE due to tinidazole.⁸ In India, this drug is one of

the most common drugs self-medicated by general population for any gastrointestinal infections.

The most important history in diagnosis of FDE is recurrence of lesions after taking offending drug. The confirmatory test is an oral challenge test. Due to fear of aggravation of symptoms, obtaining consent for the oral challenge test in most patients is difficult. Therefore, FDE has to be the first differential diagnosis in a patient with history of recurrent similar eruptions of lesions after taking a particular drug. The ultimate treatment would be to withdraw the offending drug at the earliest followed by an antihistaminic and corticosteroids. The patient was also advised not to take any drug with 5-nitroimidazole derivative as cross-reactivity is known to occur.

Final diagnosis

The final diagnosis was FDE due to tinidazole. FDE due to tinidazole is an uncommon adverse effect. It can cause significant morbidity for several days especially when involving oral mucosa. It has to be taken judiciously. Discontinuing the drug immediately is an absolute necessity.

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