ejpmr, 2019,6(10), 601-602

SJIF Impact Factor 6.222

EUROPEAN JOURNAL OF PHARMACEUTICAL AND MEDICAL RESEARCH

www.ejpmr.com

Case Study

ISSN 2394-3211

EJPMR

METRONIDAZOLE INDUCED BALANITIS: A RARE CASE REPORT

Sanket Bakshi[1], Aman Agrawal[1], Sankalp Khanke[1], Vaishnavi Toshniwal[1] and Sunil Kumar*[2]

Medical Students[1] and Professor and Head[2]

Department of Medicine, Jawaharlal Nehru medical college, Datta Meghe Institute of Medical Sciences (Deemed to be University), Wardha, Maharashtra, India.

***Corresponding Author: Sunil Kumar**

Professor and Head, Department of Medicine, Jawaharlal Nehru Medical College, Datta Meghe Institute of Medical Sciences (Deemed to be University), Wardha, Maharashtra, India.

Article Received on 12/08/2019 **Article Revised on 02/09/2019** **Article Accepted on 22/09/2019**

ABSTRACT

Any drug can have adverse reaction and should be considered in any patient who develops any skin lesion/ eruption after taking it. We hereby report a case of drug reaction on glans penis due to metronidazole, a commonly used nitroimidazole-derivative in 60 year old patient who had been prescribed for acute gastrointestinal infection.

KEYWORDS: Adverse Drug Eruption, Glans Penis, Balanits, Metronidazole.

INTRODUCTION

Adverse drug reaction is common type of drug reaction usually occurs within hours of administration of the offending drug. They are well defined, circular, hyperpigmented, fixed, and more commonly as morbilliform rash associated with itching.[1,2] Some intrinsic factors influence the risk of cutaneous drug eruption such as genetic variation and HLA associations, in the metabolism of the drug.[2] Although the true incidence of adverse drug reaction is difficult to quantify. Among all hospitalized patients the incidence of CDRs has been found to range from 1 to 3%.[2,3]

CASE REPORT

The point discussed in the case is regarding the acute drug reaction evoked after the administration of Metronidazole (a synthetic nitroimidazole derivative) which has a clinical indication in gastroenteritis infection.

Case

A 60 year old male patient, farmer by occupation admitted in the general medicine ward with complaint of ulcer on glans penis which was associated with itching. There was history of loose motion and pain abdomen 2 days back for which he had been prescribed tablet metronidazole by general physician. He developed ulcer which was itchy over the glans penis. The patient was non diabetic and he denied history of any sexual exposure other than his wife. On examination, there was no pus discharge; there was single superficial non-tender ulceration with the erythematous halo over the glans without lymphadenopathy. There was no history of hypertension, tuberculosis or autoimmune disorder and any history of treatment with corticosteroids. On laboratory investigation, his emoglobin was 9.8 mg% and total leukocyte count of 7000/cm with 70% polymorphs, other parameters were normal. His enzyme-linked immunosorbent assay (ELISA) for human immunodeficiency virus (HIV) and VDRL test was negative.

We keep the possibilities of the adverse drug reaction using Naranjo et al's scoring system.[3] The patient presented with drug eruption immediately after oral administration of metronidazole (+2) and rapidly recovered after stopping the drug (+1). There was no alternative explanation for the reaction (+2). According to the Naranjo ADR probability scale (score=5), we categorised it as a 'probable' reaction to the drug. In severity assessment it was a mild adverse drug reaction (level 2) as per Hartwig et al scale.[4] We kept arthropod bite reaction, syphillis and erythema multiforme as possible differentials. However, there was no history of insect bite. The lesions were not target shaped, which are typical of erythema multiforme; and other features of syphilis and VDRL was negative.

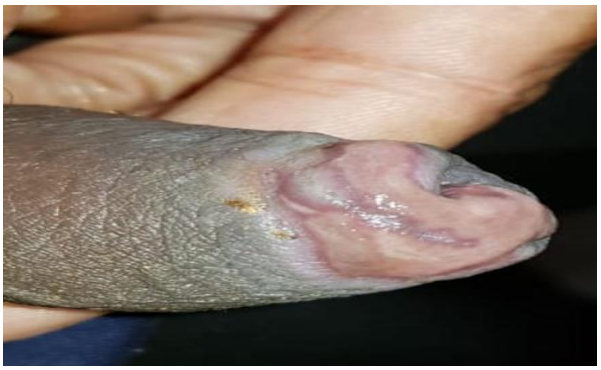

Figure 1: Bullae on Glans With Inability To Retract The Prepuce.

DISCUSSION

Metronidazole is a synthetic, nitroimidazole-derivative prodrug that is activated by reduction of the nitro group by susceptible organisms and acts by getting reduced to a product which interacts with DNA to cause a loss of helical DNA structure and strand breakage resulting in inhibition of protein synthesis and cell death in susceptible organism.[1] Common side effects are headache, nausea, dry mouth, Vomiting, abdominal distress and a metallic taste. Sometimes this has also neurological side effects like dizziness, numbness or paresthesias, vertigo, encephalopathy, convulsions, incoordination, and ataxia which may be severe and requies discontinuation. Urticaria, flushing, toxic epidermal necrolysis and pruritus are indications of drug sensitivity. We reported genital ulceration on glans penis due to metronidazole which is very rarely and so much so, in books it is not mentioned in the list of causative drugs.[1,2] Only case reports are available.[3,4,5]

The exact pathogenesis of drug reaction is unknown, although antibodies, antibody-dependent, cell-mediated cytotoxicity, and serum factors have been implicated. According to one hypothesis it is classified as a type IVc immunologic reaction. There is also an association with HLA Class I antigens, suggesting that there may be genetic predisposition to these reactions.[2,5]

Conflict of interest: nil.

REFERENCES

1. Sanmukhani J, Shah V, Baxi S, Tripathi C. Fixed drug eruption with ornidazole having cross-sensitivity to secnidazole but not to other nitro-imidazole compounds: a case report. Br J Clin Pharmacol, 2010; 69(6): 703–704.
2. Iannini P, Mandell L, Felmingham J, Patou G, Tillotson GS. Adverse cutaneous reactions and drugs: a focus on antimicrobials. J Chemother, 2006; 18(2): 127-39.
3. Wahlang JB, Sangma KA, Marak MD, et al. Fixed drug eruption due to metronidazole: review of literature and a case report. Int J Pharma Sci Res., 2012; 2013: 331–4.
4. Sengupta P, Sharma A, Bagchi C, Tripathi S. Nitroimidazole derivative-induced fixed drug eruptions. Not so uncommon. Indian J Pharmacol, 2011; 43(2): 218–219.
5. Arora SK. Metronidazole causing fixed drug eruption. Indian J Dermatol Venereol Leprol, 2002; 68: 108-9.