

# Metronidazole induced aphthous ulcer with angular cheilitis

## Abstract

Metronidazole is an antiprotozoal drug, which has broad spectrum cidal activity against anaerobic protozoa and microaerophilic bacteria. Aphthous ulcer is a very rare side effect with metronidazole. Here we report a case of 55 year old male suffered from metronidazole induced aphthous ulcer with angular cheilitis.

**Keywords:** metronidazole, adrs, cheilites

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Aruna Bhushan,<sup>1</sup> Ved Bhushan ST<sup>2</sup>

<sup>1</sup>Associate Professor, Department of Pharmacology, India

<sup>2</sup>Professor of Surgery, KLE- Centrinary Charitable Hospital, India

**Correspondence:** Aruna Bhushan, Associate Professor, Department of Pharmacology, BIMS, Karnataka, India, Tel 9480538661, Email arunamarina@yahoo.co.in

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## Introduction

Metronidazole, chemically a nitroimidazole is an antiprotozoal drug, which has broad spectrum cidal activity against anaerobic protozoa, anaerobic and microaerophilic bacteria. It was introduced in 1959 for trichomoniasis, and later found to be highly active amoebicide. Metronidazole after entering the cell by diffusion, its nitro group is reduced by certain redox proteins to a highly reactive nitro radical, which acts as an electron sink competes with the biological electron acceptors generated by cell mitochondria and hence interferes with energy metabolism. The drug is completely absorbed orally, metabolized in liver followed by renal excretion. The recommended dose is 500 to 750mg P.O TID for 7 to 10days. It can be given intravenously, by loading dose of 15mg/kg is followed 6hours later by a maintenance dose of 7.5mg/kg every 6hours, usually for 7 to 10days. The common adverse effects are anorexia, nausea, metallic taste, dryness of mouth, abdominal cramps, headache, glossitis, urticaria, rashes and chronic use leads to peripheral neuropathy and CNS side effects. Here we report a case of 55year old male suffered from metronidazole induced aphthous ulcer with angular cheilitis.

## Case report

A 55years old male was suffering from diarrhea since 1 day and he took Metrogl (metronidazole 400mg tablets) twice a day and on the 2<sup>nd</sup> day he noticed swelling of the lips and blebs on the lower lip then on the upper lip the swelling and blebs was associated with painful movement of the oral cavity and difficultly in the swelling and eating.

The detailed history and complete physical exam was done.

There was no history of any allergy in the past to any drugs and he had no similar episodes in the past. On examination he was a middle aged man in good health with normal vital signs. All systemic examination was within normal limits. Local examination revealed that he had swollen lips lower was more than the upper lip. He had blebs over the lower lip and the movements were both painful and restricted oral cavity was normal.

All routine investigations of blood were within normal limits.

Management was done as follows.

The tablets of Metrogl were stopped immediately. Vitamin B

complex and Anti histaminic CPM (chlorpheniramine maleate 10mg tablets) twice daily was started. Patient was also prescribed topical anesthetics Zytee (choline salicylate and benzalkonium chloride solution 10ml gel) small quantity to be applied on affected area twice daily.

The patient gradually and progressively improved within 5-7days lesions resolved within 7-10days and completely recovered in 2weeks.

## Discussion

Metronidazole is a frequently prescribed drug for amoebiasis, giardiasis, trichomonas vaginitis, anaerobic bacterial infections, Helicobacter pylori eradication, pseudomembranous enterocolitis etc. Aphthous ulcer is a very rare side effect with metronidazole where as metronidazole it is being prescribed with other drugs for granulomatous cheilitis.<sup>1</sup> Hypersensitivity reactions to metronidazole are infrequently observed. However, we believe that such reactions are increasing due to growing use of the drug for the treatment of amoebiasis and anaerobe infections combined with other antibiotics. Stevens Johnson syndrome and neurotoxic effects of metronidazole reported by Magazine & Chogtu.<sup>2</sup> Acute oromucosal and palmar desquamation: a severe cutaneous adverse reaction to amphotericin and metronidazole was noted by Connolly & Russell<sup>3</sup> and Metronidazole-induced fixed drug eruption have been observed by Kumar et al.<sup>4</sup> Metroniazole is implicated in many cases of Pancreatitis.<sup>5</sup>

In our patient systemic approach was followed to determine whether the suspected adverse drug reaction was actually due to the drug or a result of any other factor. Naranjo's ADR probability scale was used to determine a causal relationship between aphthous ulcer and treatment with metronidazole. The following criteria was taken into account, the ADR developed within 2days of starting treatment, the condition improved within 1week of discontinuation of drug. The patient was prescribed with B complex vitamins, topical anesthetics and anti histaminics and there was complete recovery in a period of 7-10days. Rechallenge of the drug was not done due to ethical issues. No differential diagnosis could be made for this condition. Hence it was considered that the lesion was probably caused by metronidazole (Naranjo's scale+7). WHO- Uppsala monitoring centre (UMC) causality assessment criteria also indicated a probable assessment.

## Summary

Metronidazole is a widely used drug, prescribers should be aware with these adverse reactions for early detection and intervention. The patient should also be encouraged to report any abnormal manifestation following use of metronidazole to prevent other life threatening conditions which have been reported (Figure 1) (Figure 2).



**Figure 1** Aphthous ulcer with cheilitis.



**Figure 2** Aphthous ulcer, Lower lip.

## Acknowledgements

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## Conflict of interest

Author declares that there is no conflict of interest.

## References

1. Gupta A, Singh H. Granulomatous Cheilitis: Successful Treatment of Two Recalcitrant Cases with Combination Drug Therapy. *Case Rep Dermatol Med.* 2014;2014:509262.
2. Magazine R, Chogtu B. Stevens Johnson syndrome and neurotoxic effects of metronidazole. *Indian J Pharmacol.* 2014;46(5):565.
3. Connolly R, Russell S. Acute oromucosal and palmar desquamation: a severe cutaneous adverse reaction to amphotericin and metronidazole. *BMJ Case Rep.* 2014.
4. Kumar N, Sundriyal D, Walia M, et al. Metronidazole induced fixed drug eruption. *BMJ Case Rep.* 2013.
5. Sura ME, Henrich KA, Suseno M. Metronidazole associated pancreatitis. *Ann pharmacother.* 2000;34(10):1152–1155.