

Fixed Drug Eruption After Irrational Combination Therapy

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Abstract

A 16-year-old female patient came to the hospital with the complains of itching over hand, leg, back and rashes all over the body after the administration of ofloxacin, ornidazole and metronidazole. The dermatologist suspected this as a fixed drug eruption. Causality assessment by WHO scale found the it to be a 'possible' adverse drug reaction. The case also highlights the rampant irrational misuse of combination of drugs including two drugs from the same class.

Keywords: Fixed drug eruption, Ornidazole, Ofloxacin, Metronidazole, Irrational therapy

INTRODUCTION

The term fixed drug eruption (FDE) was first coined by Brocq in 1894. This is a delayed type of hypersensitivity reaction. Epidemiology of cutaneous adverse drug reactions.¹ Every drug has the potential to cause some reaction. FDEs are adverse drug reactions caused by drugs such as: ciprofloxacin, doxycycline, NSAIDs, phenytoin, fluconazole, metronidazole etc. Incidence of FDEs are more with metronidazole as compared to ornidazole and ofloxacin. Very few cases of FDEs due to ornidazole have been reported till now.² FDE occurs at the same location of the skin or mucous membrane due to repeated intake of the drug. Ornidazole

is a 5-nitroimidazole and ofloxacin is a synthetic chemotherapeutic antibiotic, which comes under the second-generation fluoroquinolones. Though mostly irrational, the combination of ornidazole and ofloxacin is commonly used for the treatment of acute gastroenteritis. Metronidazole is a synthetic nitroimidazole derivative.³ It is a prodrug which interacts with DNA and inhibit the protein synthesis and cell death. These drugs are very commonly, and most of the times unnecessarily prescribed for gastroenteritis.

CASE DESCRIPTION

A 16-year-old female, weight 45 kg, was suffering from nausea, vomiting and

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diarrhea since last one day. The stool frequency was 5 to 7 times in a day. She went to a local doctor for the treatment of the same. Treatment was started with antacid, Oflo-Oz 200 mg BD (Ofloxacin and Ornidazole combination) and Neuzol (Metronidazole) 400 mg TDS. After few hours, she developed itching over hand, leg, back and rashes all over the body. On observation, rashes were red in colour and circular in shape (Images 1 and 2). She was admitted in Hindu Rao Hospital for the treatment where the dermatologist suspected the case to be of Fixed drug eruption. The earlier prescribed medicines were stopped without any further dosage administered and the treatment was started with injection pheniramine and dexamethasone intravenously. The itching and the rash subsided and the patient was better by evening. The severity of the adverse drug reaction was moderate and according to the WHO causality scale, this case was assessed to be under the 'possible' category of causality assessment.



Image 1 Fixed Drug Reaction



Image 2 Fixed Drug Reaction

The reaction could not be attributed one particular drug as similar reactions have been reported to be caused by each drug individually in the past.⁴ The diarrhea episodes waned off by the end of second day.

DISCUSSION

Fixed drug eruption is common in those people who are taking multiple drug therapies. In this case the patient was prescribed very irrational combination of both metronidazole and tinidazole along with ofloxacin by a local doctor. Apart from the adverse drug reaction, this is also a glaring example of rampant misuse of antimicrobial drug therapy resulting in unnecessary adverse drug reactions and also contributing to antimicrobial resistance. The patient was not having fever, making it less likely to be a case of bacterial infection and so ofloxacin usage was irrational. Addition of even a single drug of the two,

metronidazole or ornidazole, was totally unwarranted in this case, as the patient was having frequent watery stools for just one day, making it unlikely to be due to amoebiasis. Furthermore, the two drugs, metronidazole and ornidazole, from the same class were prescribed to the patient, which was highly irrational therapy.

The reduction in gastrointestinal symptoms on second day, suggests the cause to be viral gastroenteritis, which is and should be the usual initial suspect rather than empirically beginning antibiotic therapy. The adverse drug reactions such as these need proper management after withdrawing the suspected drugs.

Since the patient did not have any medical history of skin reaction to such drugs, therefore reaction was unpreventable in this case but can be prevented in future for the patient.

CONCLUSION

The adverse drug reactions such as these need to be promptly suspected and proper management should be undertaken after withdrawing the suspected drugs. The incidence of such events can be minimized if there is more sensible and rational use of drugs especially the antimicrobials.

REFERENCES

1. Mockenhaupt M. Epidemiology of cutaneous adverse drug reactions. *Allergol Select* 2017;1:96-108.
2. Sanmukhani J, Shah V, Baxi S, Tripathi C. Fixed drug eruption with ornidazole having cross-sensitivity to secnidazole but not to other nitroimidazole compounds: a case report. *Br J Clin Pharmacol* 2010;69:703-4.
3. Kumar N, Sundriyal D, Walia M, Trisal D. Metronidazole-induced fixed drug eruption. *BMJ Case Rep.* 2013; pii: bcr2013200470 doi: 10.1136/bcr-2013-200470.
4. Ralph Edwards. Causality Assessment in Pharmacovigilance: Still a Challenge. *Drug Saf* 2017;40:365-72.

