

Case Report

Ofloxacin induced hypersensitivity reaction

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ABSTRACT

Ofloxacin is a commonly used antimicrobial agent to combat various infections. The adverse profile of quinolones includes gastrointestinal symptoms, which are the most frequent, neuropsychiatric symptoms, hematologic abnormalities are less common. We report a rare case of ofloxacin induced hypersensitivity reaction in a 57 year old female patient with complaints of rashes over the axilla, upper limb and back, abdomen, thorax associated with exfoliation of skin all over the axilla associated with severe itching. Based on history and clinical examination patient was diagnosed as ofloxacin induced hypersensitivity reaction and was successfully treated with antihistamines and corticosteroids. Pharmacovigilance should be a part of patient care in order to reduce occurrence of adverse drug reaction and also encourage practitioners in reporting so as to gather more and more data regarding adverse drug reactions.

Keywords: Ofloxacin, Hypersensitivity, Maculopapular, Antihistamines

INTRODUCTION

Ofloxacin, a second-generation fluoroquinolone,^{1,2} is used in various forms, including as an injection, tablet, eye drops or ointment. Moreover, it has been prescribed as a second-line anti-tuberculosis agent in Asia, because of its wide antimicrobial spectrum and convenience of use. However, the mechanism underlying ofloxacin hypersensitivity remains unknown.³ fluoroquinolones are well tolerated, with most side-effects being mild to moderate.⁴ On occasion, serious adverse effects occur.⁵ Common side-effects include gastrointestinal effects such as nausea, vomiting, and diarrhea, as well as headache and insomnia. The overall rate of adverse events in patients treated with fluoroquinolones is roughly similar to that seen in patients treated with other antibiotic classes.⁶⁻⁸ Hypersensitivity reactions to quinolones, most of which are immediate-type, seem to have increased in recent years. Hypersensitivity reactions to quinolones are rare, ranging in frequency from 0.4% to 2%, and include erythema, itching, urticaria, skin rashes and shock.⁹

CASE REPORT

A 57-year-old female patient presented to dermatology OPD with complaints of rash all over the body. She suffered with fever 10 days back associated with chills and was prescribed with paracetamol and ofloxacin. Patient developed itching and maculopapular, erythematous rashes over body. Rashes initially started over the axilla and later spread all over to the upper limb and back, abdomen, thorax associated with exfoliation of skin all over the axilla associated with severe itching. On examination, patient was conscious, oriented and stable with blood pressure 110/70 mmHg. Rash was typically maculopapular, erythematous in nature and associated with itching. Rashes remained localized to Upper limb, back, thorax, and abdomen. There was no involvement of mucosal areas sparing eyes, buccal mucosa, vagina and tongue. Systemic examination, otherwise, did not reveal any other significant findings. Laboratory finding did not reveal any significant abnormality. Considering the history, clinical examination and laboratory findings, and

patient was diagnosed as a case of hypersensitive reaction to ofloxacin. Patient was admitted in the hospital and ofloxacin was stopped. The patient was treated with antihistamines, topical betamethasone butyrate propionate ointment and systemic steroid (methylprednisolone 1 mg/kg/i.v. for 3 days) later continued with prednisolone 20mg PO and saline mopping along with fusidic acid was done to the affected part. The intensity of rashes reduced remarkably within 10 days, and had disappeared by the 15th day of treatment.

DISCUSSION

The spectrum of adverse reactions to quinolones ranges from gastrointestinal symptoms, which are the most frequent, to neuropsychiatric symptoms, hematologic abnormalities, and, less frequently, hypersensitivity skin reactions.⁵ Our patient showed all the clinical features of hypersensitive reaction with rashes over the axilla, upper limb and back, abdomen, thorax associated with exfoliation of skin all over the axilla and associated with severe itching. In our patient, a systematic approach was followed to determine whether the suspected adverse drug reaction was due to the drug or a result of other factors. Naranjo's causality scale was used to determine a causal relationship between maculopapular rash and treatment with decitabine.¹⁰

The following criteria were taken into account: the adverse drug reaction developed within a week after starting ofloxacin, the condition improved within 10 days of discontinuation of ofloxacin, there was marked improvement by the 15th day and the adverse drug reaction could not be explained by any other condition (any allergy or the other drugs). Our patient was being treated with paracetamol, when maculopapular eruption started. However, even though the paracetamol was continued, maculopapular eruption (or simply: patient's condition) improved. Hence we considered that the rash was possibly (Naranjo's score +5) caused by ofloxacin and not by paracetamol. The World Health Organization (WHO) - Uppsala Monitoring Centre causality assessment criteria also indicated a probable association.¹¹

Stevens-Johnson syndrome is characterized to be a hypersensitivity complex that affects the skin and the mucous membranes, but in our patient there was no mucosal involvement.¹²

The treatment options are use of antihistamines, topical betamethasone butyrate propionate ointment and systemic steroid (methylprednisolone 1 mg/kg/i.v. for 3 days) later continued with prednisolone 20mg PO and saline mopping along with fusidic acid was done to the affected part. The patient responds well with subsidizing of maculopapular, erythematous rashes and other symptoms.

CONCLUSION

Though hypersensitivity reaction to ofloxacin is rare, proper history should be taken before prescribing ofloxacin. Practitioners should be aware of this rare but potentially serious adverse event, especially ofloxacin is commonly used for Pneumonia, skin and soft tissue infections and genitourinary infections a close follow-up with patients to evaluate these adverse reactions, especially in case of quinolones.

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