ISSN 2091-2889 (Online)
ISSN 2091-2412 (Print)

Journal of Chitwan Medical College 2015; 5(14): 75-77
Available online at: www.jcmc.cmc.edu.np

CASE REPORT

HYPERSENSITIVITY REACTION TO OFLOXACIN: A CASE REPORT

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ABSTRACT

Adverse drug reactions(ADRs) are noxious and unintended occurring in doses routinly used for diagnosis, treatment, prophylaxis of disease or for modification of physiological functions. Skin is the most commonly involved organ followed by GIT system although ADRS may involve any system.Ofloxacin is a quinolone antibiotic. It is considered as second-generation fluoroquinolone. It is effective for treatment of a wide variety of infectious diseases acting against both Gram-positive and Gram-negative bacteria.We present a case of hypersensitivity reaction to oral ofloxacin. Being rarity we thought of reporting this case.

Key words: *Adverse drug reactions, Hypersensitivity, Ofloxacin.*

INTRODUCTION

Ofloxacin is a synthetic antibiotic of the fluoroquinolone drug class.[1] It is available for oral and intravenous administration.Its mechanism of action is by inhibiting DNA gyrase, a type II topoisomerase, and topoisomerase IV.[2] It has been associated with adverse drug reactions, such as tendondamage[3] and peripheral neuropathy. It may rarely cause severe psychiatric adverse reactions.[4] But hypersensitivity reaction following oral administration is rare. Being its rarity, hypersensitivity reaction to oral ofloxacin is being reported as a case report.

Case report

A 48 year old male came to the hospital for loose stools for past 4 days. He had no history of vomiting, pain in abdomen and fever. He was not a known diabetic, hypertensive & asthamatic. There was no history of atopy. He was advised to take oral ofloxacin 200mg tablet twice daily and plenty of water. After taking tablet, he developed erythematous urticarial, pruritic rash all over the body and swelling of hands and feet.Complete blood count, renal and liver function tests, ECG, chest X ray were normal. On examination he was conscious and tachypneic. Hehad weak peripheral pulses with hypotension(BP 90/60 mm Hg), prolonged capillary filling time and tachycardia. His oxygen saturation on room air was 82%. As these events happened after taking ofloxacin and there was no history of other drug intake, it was presumed as hypersensitivity reaction and treated accordingly with oxygen, adrenaline, steroids and crystalloid fluid infusion etc.Patient responded with marked improvement &was discharged in a satisfactory condition on 5th day.

Discussion

Adversedrug reactions(ADRs) may occur due to

immonoloogical or non immunologicalmechanisms.[5] As per Rawlins and Thompsons classification,[6] ADRs are classified as Type A, Type B, Type C & Type D reactions. Type A reactions are characterised by exaggerated normal pharmacology of the medication, are dose related and predictable. Type B reactions are unrelated to normal pharmacology and are unpredictable. On the other hand, type C reactions are seen in prolonged therapy like analgesic nephropathy, while Type D reactions reactions include delayed reactions like teratogenesis and carcinogenesis. Narango et al[7] has described ADRs probability as definite, probable, possible and suspected as far as probability of causative noxious agent is concerned.

The fluoroquinolones are potent bactericidal agents acting against a broad variety of microorganisms. Ofloxacin is a commonly used quinolone for respiratory tract infections, GI infections, cervicitis and UTI. Severe reactions to common antimicrobial drugs like cotrimoxazole, fluroquinolones & penicillins are most common causing dermatomucosal ADRs are well-documented in medicine and remain a challenge in practice.[8] Meena Shrivastva et al in their study[9] reporting 2639 adverse drug reactions over a period of 4 years have found that antimicrobial agents were main culprits(45%), with 34% ADRs occurring in the form of angioderma, Steven-Johnsons syndrome, anaphylaxis, nephrotoxicity & laryngospasm. These authors have also reported that skin is the most commonly affected organ(37.24%) followed by GIT(32.51%) and rest other organs regarding ADRs while ofloxacin causing ADRs in their study was responsible in 2.27% cases.

Common adverse reactions to ofloxacin are peripheral neuropathy, tendon damage, prolonged QT interval/ torsades de pointes, pseudomembranous colitis, rhabdomyolysis (muscle wasting).[10] Hypersensitivity reactions to ofloxacin are rare entity as per our current experience. Though ofloxacin is extensively used and a safe drug, severe hypersensitivity reaction[11] can occur following ofloxacin. Hence the case report.

Conclusion

Adverse drug reactions include allergy, idiosyncracy, pharmacological or toxicological machanisms and interactions between different drugs or as a result of abuse or dependence. Identification of the risks involved with respect to type of reaction, system involvement & probable cause is very important in order to minimise ADRs. This needs strict pharmaco vigilance as far as use of these likely drugs and their safety assessment is concerned.

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