CASE REPORT: OFLOXACIN INDUCED– ANGIOEDEMA

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ABSTRACT

A 24 yr old male arrived at our clinic with facial swelling and puffy eyes, he had a history of loose stool for which he was prescribed with combination of ornidazole (200mg) and ofloxacin (500mg). The reaction is probable due to ofloxacin. Very few such reactions have been reported with ofloxacin. The physician is advised to discontinue the drug and was given appropriate treatment and patient recovered from the reaction.

KEYWORDS: Ofloxacin, Angioedema, Fluroquinolones

INTRODUCTION

Ofloxacin is a second generation 4-fluoroquinolone antibiotic. It is well tolerated by most of the patients, and common adverse effects involve the gastrointestinal (GIT) system, central nervous system (CNS) hyper-sensitivity reactions, metabolic reactions, and anaphylactic reactions.[¹] In a clinical trial study, 11% of patients experienced side effects, out of only 4% alleviated from the symptoms after discontinuation of therapy.[²,³]

Serious and occasionally fatal hypersensitivity and/or anaphylactic reactions have been reported in patients receiving Ofloxacin. These reactions often occur following the first dose like cardiovascular collapse, hypotension/shock, seizure, loss of consciousness, tingling, angioedema (including tongue, laryngeal, throat, or facial oedema /swelling), airway obstruction (including bronchospasm, shortness of breath, and acute respiratory distress), dyspnoea, urticaria, itching, and other serious skin reactions. The first step is immediate discontinuation of the drug. Serious acute hypersensitivity reactions may require treatment
with epinephrine and other resuscitative measures, including oxygen, intravenous fluids, antihistamines, corticosteroids, pressor amines, and airway management, as clinically indicated.\cite{4,5}

CASE REPORT
A 24yr old male labourer arrived in the clinic with the history of swelling around his eyes, face and disturbed sleep. He had history of loose stool since 3days, for which he was on ofloxacin - ornidazole combination (500mg ofloxacin + 200mg ornidazole). The subject received one dose of the ofloxacin -ornidazole combination and received supportive therapy, loose motions decreased in frequency and he noticed the swelling of face and eye in the afternoon (Fig1). There was no history of breathing difficulty and itching, vitals were normal, pulse 72bpm, BP 120/70mmHg , chest clear, and normal cardiac rhythms.

A provisional diagnosis of ofloxacin-induced angioedema was made and the subject was advised to stop the ofloxacin–ornidazole combination, and advised dexamethasone (dexona) 0.5mg stat, pheniramine maleate (avil) 25mg stat, cetirizine 10mg OD for 5 days . The next day swelling of face and eyes reduced and patient recovered from the symptoms. The consent from the patient was taken for the publication of the data as a case report

![Figure 1: Affected area of reaction](image)

DISCUSSION
Ofloxacin belongs to second generation fluoroquinolones. The newer fluoroquinolones have broad-spectrum bactericidal activity, good tissue penetration, favourable safety profile and excellent oral bioavailability. First-generation drugs (e.g. nalidixic acid) can achieve minimal serum levels. Second-generation quinolones (e.g., ciprofloxacin) have increased gram-negative and systemic activity. Third-generation drugs (e.g., levofloxacin) have expanded activity against gram-positive bacteria and atypical pathogens. Fourth-generation quinolone drugs (currently only trovafloxacin) add significant activity against anaerobes. The most common adverse effects of the fluoroquinolones are nausea, vomiting and diarrhea, which
occur in 3 to 6 per cent of recipients.\cite{8} Other common side effects are central nervous system effects (headache, confusion and dizziness), phototoxicity (more common with lomefloxacin and sparflxacin), cardiotoxicity (sparflxacin) and hepatotoxicity (levofloxacin, trovafloxacin).\cite{10} Levofloxacin mediated Achilles tear has been reported recently however tendinopathy was associated with earlier quinolone classes.\cite{9}

Diarrhoea (loose stools) can be of sudden onset and lasting for less than four weeks (acute) or persistent (chronic). In most cases, diarrhoea eases and goes within some days but sometimes takes longer. The main treatment is rehydration to prevent fluid loss, in case of diarrhoea caused by bacteria or any infectious agents use of antibiotics are recommended.\cite{6}

Angioedema is sub-mucosal, subcutaneous swelling or both including respiratory or gastrointestinal tracts due to inflammatory reactions. Allergic angioedema is a hypersensitivity reaction to various causes such as drugs, foods, insect venoms. The main pathophysiologic process is due to the release of inflammatory mediators such as histamine, bradykinins and serotonins which are responsible for inflammation, arteriolar dilation, eventually vascular leakage and tissue swelling.\cite{7}

CONCLUSION

Here, in our case report patient experienced a hypersensitivity reaction of angioedema of face resulting in facial swelling and puffy eyes which is rare reported in less than 5 % of users. The reaction was analysed using Naranjo’s causality assessment scale and score was 9 hence we consider causal relationship as “probable”.

Angioedema is often self-limiting may result in respiratory obstruction and be fatal, mainly implicated in NSAIDS and Antibiotics. According to the literature survey this is the first kind of reported case for angioedema, for future this acts as signal generator.

CONFLICT OF INTEREST

None Declared

REFERENCES


