



OFLOXACIN INDUCED TOXIC EPIDERMAL NECROLYSIS

Pharmacology

Dr. Md Shadab Alam* Tutor, department of pharmacology, Patliputra Medical College, Dhanbad.
*Corresponding Author

Dr. Asish kumar biswas Associate Professor, department of pharmacology, Patliputra Medical College, Dhanbad.

Dr. Mona kumari Assistant Professor, department of pharmacology, Patliputra Medical College, Dhanbad.

Dr. Arun kumar Choudhary Professor and Head, department of pharmacology, Patliputra Medical College, Dhanbad.

ABSTRACT

Adverse drug reaction is an important agenda of the pharmacovigilance programme of India. In that contest, Toxic Epidermal Necrolysis is severe episodic mucocutaneous reaction caused as a result of ingestion of drugs like sulfonamide, Aminopenicillin, phenophthalein, oral hypoglycaemic drugs, isoniazide etc. The main objective here is to report a fatal case of Toxic Epidermal Necrolysis in a woman who was treated with 400 mg of ofloxacin for enteric fever. Although, Toxic Epidermal Necrolysis is infrequent, but it is fatal. Fluroquinolones rarely causes TEN and there is limited published information regarding ofloxacin induced TEN. So, it is concluded that this case report may creates an awareness about ofloxacin induced TEN.

KEYWORDS

Adverse drug reaction, pharmacovigilance, Toxic Epidermal Necrolysis, ofloxacin.

INTRODUCTION:-

Adverse drug reaction is an important agenda of the pharma covigilance programme of India. In that communication our medical college and hospital, PMCH, Dhanbad is participant of the same. Toxic Epidermal Necrolysis is a medical emergency, as the extensive mucocutaneous blistering is associated with high mortality rate.¹ It is usually drug induced. The most commonly implicated drugs are anticonvulsants, sulphonamides, sulphonylureas, NSAIDs, allopurinol, antiretroviral therapy etc.² In contrast, fluroquinolones, of course being wide antimicrobial spectrum has been prescribed mostly, but are well tolerated having low incidence of serious side effect³ and rarely causes TEN⁴. Furthermore, there is limited published information regarding ofloxacin induced TEN⁵. In view of this, ADR-TEN induced by ofloxacin was recorded and informed duly.

Case report:-

An 18 years old girl was administered 400 mg of ofloxacin orally bid for enteric fever. After taking two dose of ofloxacin, she observed erythematous maculopapular skin rashes all over the body and developed generalized blisters over erythematous rashes following next day. Ofloxacin was then stopped. But, lesions progressed even after treatment by local doctors. Gradually the patient became drowsy and there was foul smelling discharge from the whole body. Finally she was admitted in MICU, PMCH Dhanbad. Blood test showed that she had raised ESR count:-56mm/hr, decrease in Hb:-6.9g/dl, TLC:- $3.9 \times 10^3/\mu\text{l}$, blood urea:-29 mg/dl, sr. creatinine:-0.6mg/dl, urine analysis revealed sugar ++, sr. Na⁺:-138meq/l, sr.k⁺:4.81meq/l, sr.ca⁺⁺:-6.9 meq/l. Her chest X-ray showed that she has increased bronchovascular marking. After history, clinical examination, lab report and ultimately by the evaluation of the medical team, the patient was diagnosed as a case of Ofloxacin induced Toxic epidermal necrolysis. The patient was then resuscitated with i.v fluids and electrolytes. Injectable antibiotics ceftriaxone 1 gm iv bid, amikacin 500mg iv bid was initiated with supplement of inj. hydrocortisone 100 mg i.v tds, injectable antihistaminics, inj.pheniramine 1 amp. i.m bid and inj. ranitidine 1 amp i.v bid. There was gradual improvement in terms of level of consciousness, but after two days at afternoon, the patient developed sudden onset of acute breathlessness with laboured breathing. She was cyanotic with oxygen saturation less than 40% while breathing at room air. Immediately, she was intubated for mechanical ventilation and shifted to higher antibiotics and conservative management. Despite that the condition of the patient did not improve and finally at 5 pm she died.

DISCUSSION:-

Adverse drug reactions as caused by implicated drugs are one of the

leading cause of death in 0.3-7% among the hospitalized patient which may vary from mild to severe reaction such as Stevens-Johnson syndrome or Toxic epidermal necrolysis⁶. Toxic epidermal necrolysis is a rare, idiosyncratic and fulminant bullous dermatitis that is characterized by severe exfoliative epidermal sloughing of the skin and mucus membrane⁷. Although, initially the clinical presentation of Stevens-Johnson syndrome and Toxic epidermal necrolysis are almost same, but it differs in severity. TEN is more severe in clinical presentation involving more than 30% of the body surface area, on the other hand SJS is less severe involving less than 10% of the body surface area⁸. The risk of death for patient of TEN can be predicted according to the severity of the illness. As the use of Ofloxacin is increasing day by day owing to its broad spectrum antibiotics which is of course well tolerated having low incidence of serious side effect³ and rarely causes TEN⁴. But, there is very limited published information regarding ofloxacin induced TEN⁵. In this case unfortunately, no skin biopsy was performed, but however, a team of dermatologist and intensive care physician, on the basis of clinical diagnosis declared to be a case of Toxic epidermal necrolysis induced by ofloxacin.

CONCLUSION:-

There are few case reports available which shows that ciprofloxacin^{9,10} and trovafloxacin¹¹ is the implicating agent causing Toxic epidermal necrolysis. But, there is very limited published information regarding ofloxacin induced TEN. Hence, strong vigilance should be kept on ADR so that true evaluation of the problem can be measured and necessary steps should be taken appropriately.

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