Phototoxic Drug Reaction to Gatifloxacin

Sir,

Gatifloxacin is a relatively new broad spectrum 8-methoxy fluoroquinolone antimicrobial with potent activity against gram-positive bacteria, including penicillin resistant Staphylococcus aureus, as well as excellent activity against gram-negative bacteria and some atypical organisms. The adverse effects with this drug include nausea, vomiting, headache, dizziness, skin rash and potential to cause QTc prolongation.1 Phototoxic reactions have been more commonly seen with some fluoroquinolones like Sparfloxacin and Lomefloxacin. There is paucity of data on the incidence of phototoxic reactions associated with the use of Gatifloxacin.

A forty-years male labourer presented with recurrent episodes of itching and scaly lesions over dorsum of both hands. There was a similar history of such lesions in past. The patient was often prescribed Ciprofloxacin for a period of five to seven days during acute exacerbations. However, the lesions never resolved completely. Previous history did not reveal any adverse event to the use of Ciprofloxacin.

In the present episode the patient developed severe oozing, crusting and foci of frank pus discharge from the lesions over dorsum of both hands for a period of fifteen days. The patient consulted a private doctor and was prescribed oral Gatifloxacin in doses of 400 mg once a day for 5 days along with Pheniramine 25 mg three times a day and topical application of Fluticasone and Mupirocin. Three days later, he reported to Dermatology out-patient department, with complaint of high grade fever and intensely itching erythematous macules and papules distributed over photo-exposed sites like face, neck, both arms and area of chest which got exacerbated on exposure to sun. There was also marked facial and periorbital edema accompanied with generalized lymphadenopathy. The abdomen, back and lower limbs were completely spared. There was no lesion over the oral and genital mucosa, scalp or nails. However, there was improvement in the previous lesions over dorsum of hand.

Patient was admitted in the hospital. Routine hematological and biochemical investigations were carried out. There was no derangement in any of the above parameters except for mild elevation of hepatic transaminases. Skin biopsy showed epidermal spongiosis with mild to moderate dermal mononuclear infiltrate.

Based on skin biopsy findings and nature and distribution of lesions patient was suspected to have developed phototoxic drug eruption most likely due to gatifloxacin, which was taken for a period of three days. Gatifloxacin was stopped immediately and patient was advised to continue with Pheniramine and topical combination of fluticasone and mupirocin locally on dorsum of hands. He was also advised protection from sun along with the use of sunscreen on the photo-exposed sites. After three days, the lesions started regressing, fever subsided and there was a marked clinical improvement in the condition of the patient within one week of stopping Gatifloxacin. The liver function tests were repeated and the levels of transaminases were within normal limits. The casual relationship was worked on the basis of WHO criteria. Based on that the reaction was bracketed in the category of ‘possible’, as there was good temporal relationship between drug administration and occurrence of adverse drug reaction.2 Also adverse drug reaction decreased when Gatifloxacin was stopped.2 It is unlikely to be attributed to concurrently administered drugs like Pheniramine, Fluticasone and Mupirocin combination because when gatifloxacin was stopped and other drugs still continued, the patient’s condition improved.

In a recent study the phototoxic potential of various quinolones was compared using a mouse model.3 It was observed that 8-halogenated fluoroquinolones namely, Lomefloxacin and Sparfloxacin produced severe phototoxic reaction in contrast to 8-methoxy quinolones like gatifloxacin and moxifloxacin.3 In contrast, we have come across this particular case of phototoxic reaction associated with short-term use of gatifloxacin. This is yet another evidence that supports the fact that animal data cannot be completely extrapolated to human beings. Animal data should always be backed up by clinical case reports and findings. Hence an intensive monitoring of adverse drug reaction profile with the newer fluoroquinolones is warranted. Useful data can only be generated if monitoring of adverse drug reactions is undertaken through nationwide network involving all the stakeholders.4

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Obscure Gastrointestinal Bleed - A Diagnostic and Therapeutic Challenge

Sir,

Small bowel bleeding is infrequent and presents a challenge to the clinician. Approximately 30-40% of gastrointestinal bleeding localized in the small bowel is due to angiodysplasia; a vascular malformation. Localizing a lesion in case of obscure gastrointestinal bleeding is a diagnostic challenge.

A 53 years male was admitted with history of chronic iron deficiency, had been found to have anemia with hemoglobin of 9.5 gm% approximately 2 years ago. Initially he was put on iron and vitamin supplements. Later his hemoglobin dropped further to 7.5 gm%. He was evaluated for his anemia. On examination he had pallor, rest of the general physical and systemic examination was normal. The peripheral blood picture showed anisocytosis with poikilocytosis and hypochromia. His serum iron was 8 mg/dl and TIBC was 448mg/dl. His stool for occult blood was positive once. Upper Gastrointestinal endoscopy showed hiatus hernia while colonoscopy was normal. A small bowel enema done was normal. A capsule endoscopy (CE) was done to look into the cause of obscure GI bleed. CE showed multiple small angiodysplasias, in proximal jejunum and ileum. An evaluation for a hereditary angiodysplasias was done in view of personal and family history of epistaxis. ENT and ophthalmological examinations were normal. A surgical opinion was taken but in view of multiple lesions surgical resection was not possible. Double balloon enteroscopy was done to fulgurate the lesions. On DBE, small bowel till proximal ileum was visualized and multiple angiodysplasia seen. These were fulgarated using Argon photocoagulation (Figs. 1 and 2). Patient was put on oral estrogen after explaining the side effects. Patient improved and the hemoglobin increased.

Obscure GI bleed is the least common form of occult GI bleed but represents a tremendous diagnostic and therapeutic challenge. Focused evaluation of the GI tract must be done in patients with iron deficiency anemia. The small bowel should be considered as a potential site for bleeding in patients of iron deficiency anemia and negative colon and upper gastrointestinal tract examination.

DBE has been found to be a clinically useful technique for obtaining a new diagnosis and starting new treatments. DBE is a useful and safe method of obtaining tissue for diagnosis, providing hemostasis, and carrying out polypectomy. Endoscopic treatment (laser coagulation) and drug therapy (somatostatin or analogs) are valid alternatives in inoperable or non-resectable cases. DBE is a well-tolerated and safe new endoscopic technique with a high diagnostic yield in selected patients. As highlighted by our case, capsule endoscopy proved to be a safe and effective method in diagnosing the cause of obscure GI bleed. In many suspected small-bowel bleeding cases, CE should be selected for the initial diagnosis and DBE for treatment or histopathological diagnosis after detection of the bleeding site on CE.

In conclusion, in doubtful cases or in patients with persistent hemorrhage, capsule endoscopy can improve...