

## Letters to the Editor

### Photosensitivity Associated with Ciprofloxacin Use in Adult Patients with Cystic Fibrosis

Ciprofloxacin is widely used for outpatient treatment of *Pseudomonas aeruginosa* pulmonary infections in patients with cystic fibrosis (CF). The drug remains one of the few options available for outpatient management of pulmonary exacerbations, and it is generally well tolerated by patients (5). Although photosensitivity is a well-recognized side effect of therapy with the fluoroquinolone group of antibiotics, it has never been reported to be a significant problem with ciprofloxacin (1–4). We noted, however, that many of our CF patients were experiencing significant phototoxicity, even with very mild sun exposure, during ciprofloxacin therapy.

We therefore developed a questionnaire asking about symptoms experienced while a patient took ciprofloxacin, including easy sunburning, skin rash on sun-exposed areas, and eye symptoms and details of sunscreen use and its effect. This was mailed to all 95 patients monitored in the Vancouver, Canada, Adult CF Clinic and to all 50 patients monitored in the Calgary, Canada, Adult CF Clinic. We appended a short cover letter requesting that patients complete the questionnaire and return it in an enclosed stamped return envelope.

A total of 52 completed questionnaires were received (36% return); 44 of 95 were returned from Vancouver patients and 8 of 50 were returned from Calgary patients. Forty-two of 52 (81%) patients returning the questionnaire reported receiving at least one course of ciprofloxacin, and 64% had received more than five courses of treatment. Of the 42 patients who had received ciprofloxacin, 22 (52%) described symptoms of photosensitivity while on ciprofloxacin. Patients described redness and, at times, blister formation on sun-exposed areas (often with only minimal sun exposure), followed by hyperpigmentation and occasionally desquamation. Thirteen of 14 patients who used sunscreen reported that sunscreen use either prevented or markedly reduced these symptoms.

Photosensitivity is a recognized complication of therapy with the fluoroquinolone class of antibiotics (2–4). Prior to this study, however, in which we found that 52% of CF patients were experiencing phototoxicity, ciprofloxacin had never been reported to be associated with significant rates of photosensitivity (1–4).

It is interesting to hypothesize that CF patients may be at increased risk of photosensitivity. The limited published literature on the use of ciprofloxacin in patients with CF certainly suggests a higher rate of photosensitivity than is reported for non-CF patients. Jensen and colleagues (5) reported that photosensitivity was observed in 4 of 24 courses of ciprofloxacin administered to CF patients in Denmark. In 3 of 23 courses of ofloxacin, photosensitivity was observed. Rubio and Shapiro (6) report that 1 of 10 CF patients treated with oral ciprofloxacin developed an erythematous skin reaction when exposed to sunlight. Three cases of photosensitivity among 21 patients

with cystic fibrosis treated with ofloxacin were reported from Switzerland (3). These small published studies with CF patients might suggest a predisposition to photosensitivity. To our knowledge, however, more frequent or severe photosensitivity in this patient population has not been associated with treatment with other antimicrobial agents or medications, and it is not clear why patients with CF would have increased predisposition to this adverse effect.

CF patients do receive many courses and sometimes prolonged therapy with ciprofloxacin. In this study, 64% of the patients had received more than five courses of treatment. We did not have access to an adequate control group of non-CF patients, but it would be of interest to study another population receiving multiple prolonged courses of ciprofloxacin treatment. It may well be that photosensitivity is simply an under-recognized and underreported side effect of ciprofloxacin therapy and not an adverse event unique to CF patients.

We believe that photosensitivity is extremely common with ciprofloxacin therapy in adult CF patients. This potential side effect with this particular fluoroquinolone has not previously been well recognized, but patients need to be warned when the drug is prescribed, and appropriate protection measures must be provided.

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