

Case report

Fixed eruption caused by ciprofloxacin without cross-sensitivity to norfloxacin

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We report the case of a female patient who presented fixed exanthema following administration of ciprofloxacin. To our knowledge, only one case of fixed exanthema in response to this agent has appeared in the literature, and it was associated with cross-sensitivity to norfloxacin.

Key words: ciprofloxacin; cross-sensitivity; fixed eruption; quinolones.

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The quinolones are a group of antibiotics that can produce not only IgE-mediated hypersensitivity, but late reactions such as fixed exanthema as well. Cross-reactivity does not always exist between the different quinolones; thus, they should not be prohibited as a rule of thumb in cases of hypersensitivity.

We report the case of a female patient who presented fixed exanthema following administration of ciprofloxacin. To our knowledge, only one case of fixed exanthema in response to this agent has appeared in the literature, and it was associated with cross-sensitivity to norfloxacin (2).

Case report

We present the case of a 53-year-old white female with no medical history of interest. Four months before coming to our department, she had had an upper airway infection, for which her physician prescribed Belmadina® (ciprofloxacin 500 mg). Having taken the first tablet, following a latency period of 12 h, she presented intensely pruritic, confluent, macular erythematous lesions measuring approximately 2 cm in diameter, located on the backs and in the interdigital spaces of both hands and on the neck.

Despite the onset of these lesions, the patient took a second dose, which was followed by the formation of blisters containing fluid and blood at the same sites.

Ciprofloxacin was discontinued and the patient received parenteral corticosteroids for 3–4 days. The clinical picture evolved to residual hyperpigmentation of the lesions and, at examination, *café au lait* spots measuring 2 cm in diameter persisted on the backs of her hands and on her neck. The patient tolerated subsequent norfloxacin administration.

Skin prick tests with up to 2 mg/ml of intravenous ciprofloxacin solution were positive, but the same tests performed in the control group also proved positive in some subjects; therefore, the tests were considered to be nonspecific.

Skin prick tests with up to 400 mg/ml norfloxacin were negative.

Patch testing with 10% ciprofloxacin in dimethylsulfoxide was negative both at the site of previous lesions and on normal skin. Oral challenge with 125 mg of ciprofloxacin was positive and, after 1 h, the previously described lesions reappeared.

Oral challenge with 400 mg of norfloxacin was negative.

Discussion

Ciprofloxacin has been proved to cause a variety of skin lesions, but the onset of fixed exanthema is exceptional, despite the extensive clinical use of this agent. In the literature reviewed, there was only one report of fixed exanthema in response to this drug, involving a case in which norfloxacin cross-reactivity was also detected (2).

There are studies demonstrating the existence of cross-sensitivity between quinolones, a logical deduction, given their highly similar structures (3, 4, 6).

It is advisable to avoid administering all quinolones to patients who have presented an allergic reaction to any one of these substances (3), although in the case we report, despite the fact that the patient presented fixed exanthema after ciprofloxacin administration, she tolerated norfloxacin. Thus, further studies are necessary to confirm the existence of cross-sensitivity among quinolones.

Controlled oral challenge seems to be the only way to determine the diagnosis and to demonstrate cross-reactivity since prior studies based on patch tests have been inconclusive (1, 5).

References

1. ALANKO K, STUBB S, REITAMO S. Topical provocation of fixed drug eruption. *Br J Dermatol* 1987; 116: 561-7.
2. ALONSO MD, MARTIN JA, QUIRCE S, et al. Fixed eruption caused by ciprofloxacin with cross-sensitivity to norfloxacin. *Allergy* 1993; 48: 296-7.
3. DAVILA I, DIEZ ML, QUIRCE S, FRAJ J, DE LA HOZ B, LAZARO M. Cross-reactivity between quinolones. Report of three cases. *Allergy* 1993; 48: 388-90.
4. FIANDOR AM. Otras reacciones cruzadas. *Rev Esp Alergol Immunol Clin* 1990; 5: 580-6.
5. KORHJ W, SOLTANI K. Fixed drug eruption. A brief review. *Arch Dermatol* 1984; 120: 520-4.
6. STRICKER BHC, SLAGBOOM G, DEMAESNEER R, SLOT-MAEKERS V, THUIS I, OLSSON S. Anaphylactic reactions to ciprofloxacin. *BMJ* 1988; 297: 1434-5.

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