

Case report

Fixed eruption caused by ciprofloxacin with cross-sensitivity to norfloxacin

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A case of fixed eruption caused by ciprofloxacin is reported. To our knowledge, no other cases have been published. Cross-sensitivity with another fluoroquinolone has been demonstrated.

Described in 1894 by Brocq (3), fixed drug eruption (FDE) has been associated with the administration of several agents (4, 10). The incidence of FDE induced by a specific drug appears to depend on the frequency of its use (13).

Ciprofloxacin is a fluorinated quinolone with a broad antibacterial spectrum. It is widely used for the treatment of respiratory, skin, bone and joint, and urinary tract infections (7).

The therapy with ciprofloxacin is not associated with serious toxicity, and the most common adverse effects are related to the gastrointestinal tract, central nervous system, and skin (6, 12). No cases of FDE caused by ciprofloxacin have been reported to date.

We present one case with ciprofloxacin-induced fixed eruption and cross-sensitivity with norfloxacin, both of which drugs are fluoroquinolones with a similar chemical structure.

Case report

The patient was a 72-year-old woman with a long history of recurrent urinary tract infections but otherwise healthy. She had received frequent courses of treatment with different antibiotics. On four separate occasions she had presented with pruritic erythematous macules on right forearm, mammary area, and

back and sacral region, with, subsequently, residual pigmentation. The patient could identify ciprofloxacin as the drug implicated in at least one of the episodes.

An oral provocation test with 46 mg of ciprofloxacin was positive, and after 2 h the previously described lesions reappeared (Fig. 1).

Oral challenge with 400 mg of norfloxacin was followed, 2 h later, by the appearance of a pruritic erythematous macule on the third finger of the right hand (Fig. 2). Subsequent oral challenges with other structurally related drugs (sodium cromoglycate and pipemidic acid) at therapeutic dosages showed negative results. Patch testing with ciprofloxacin 10% in dimethylsulfoxide was negative both on the sites of previous lesions and on normal skin.

Discussion

Although FDE usually appears as a single pruritic erythematous macule, multiple lesions may be present. If the intensity of the inflammatory response is sufficient, blister formation may develop subsequently. When the acute phase subsides, there is usually residual pigmentation. The lesions recur in the same places each time the specific drug is administered. Systemic symptoms are unusual (2, 10, 13).

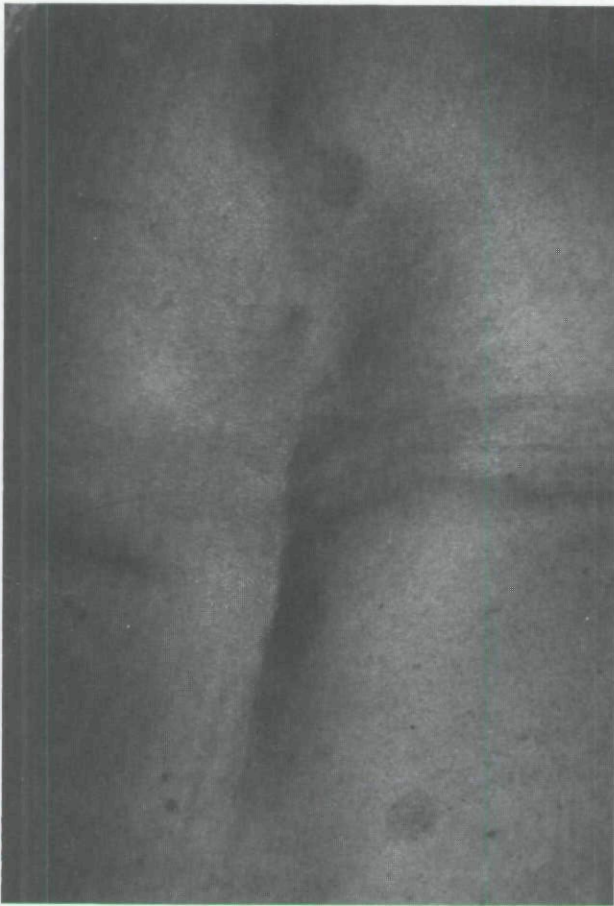


Fig. 1. Erythematous macules on back and sacral region after oral challenge with ciprofloxacin.

It is known that many drugs can cause FDE. Ciprofloxacin has been proved to cause a variety of skin lesions, but no reports of fixed eruption caused by this drug have been published to our knowledge.

We present one case with ciprofloxacin-induced fixed eruption, and the causal relationship has been proved by the reappearance of lesions after exposure to this drug. Patch testing with ciprofloxacin at previously affected skin sites was negative. Previous reports have shown conflicting patch tests results (1, 10). The choice of an inadequate vehicle or an alteration of the molecular structure of the drug may be implicated. Like other authors (5, 9), we believe that reappearance of lesions after a provocation test is the most reliable test for the diagnosis of this adverse reaction.

Cases of flare-up of previous FDE lesions induced by closely related drugs have been reported (8, 11). The case of cross-sensitivity between the two fluoroquinolones (ciprofloxacin and norfloxacin) here

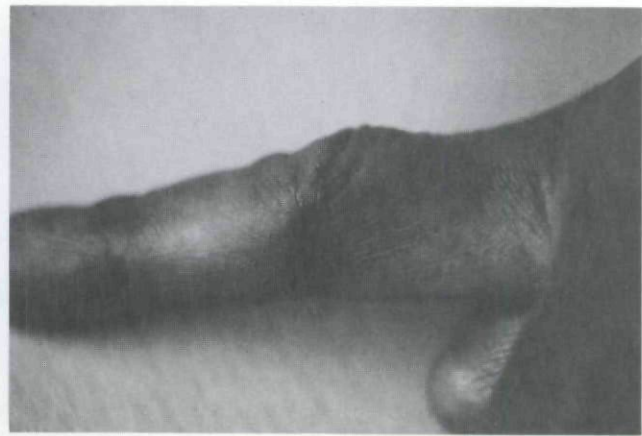


Fig. 2. Erythematous macule on finger of right hand after oral challenge with norfloxacin.

reported is unusual since these drugs with similar chemical structure induced FDE lesions at different sites.

The frequency with which ciprofloxacin is used, combined with the absence of reports of FDE to this drug, shows that our case is exceptional. Since ciprofloxacin is widely used clinically, close attention must be paid to its possible implication in any patient with a recurring eruption.

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