

LETTER TO THE EDITOR

Photoallergic reactions to angiotensin converting enzyme inhibitors

Editor

More than 40 million people worldwide are currently receiving angiotensin converting enzyme inhibitors (ACEIs), and cutaneous reactions to them, other than angioedema,¹ are infrequent. Photoallergy is an immunologically mediated form of delayed hypersensitivity, expressed only in sensitized persons, which does not occur on first exposure, is not dose-dependent and may be induced by related agents via cross-sensitivity.² Photoallergic reactions begin after 24 h of drug exposure and are characterized by an eczematous eruption with erythema, papules and vesicles located in sun-exposed areas of the skin and sparing the unexposed ones, pruritus, weeping, oozing, crusting, scaling and lichenification. Histological picture consists of epidermal spongiosis with a dermal lymphocytic infiltrate and necrotic keratinocytes. Medications more often involved include antibiotics, nonsteroidal anti-inflammatory drugs, cardiovascular drugs,³ diuretics, antidiabetics, antidepressants, antipsychotics, antihistamines and skin agents.⁴

The diagnosis is based on patient questioning, morphology of the eruption, drug interruption and rechallenge (if not contraindicated because of the risk of severe reactions), and complementary studies (biopsy and photopatch tests).⁵⁻⁷ Here, we present three patients with photoallergy associated with enalapril therapy.

Patient 1. A 74-year-old female complained of an itchy rash on the face, neck and limbs, present for the last 2 years and unresponsive to antihistamines. Interrogation did not provide clues on the cause of this rash. Examination revealed erythematous and eczematous plaques in light-exposed areas, (face, neck, forearms and legs) (Fig. 1). A history of hypertension under treatment with enalapril was present. Seven days before consultation, a worsening of the rash occurred, coinciding with a change of therapy to captopril.

Patient 2. A 73-year-old male was referred because of intense itching and a rash on the limbs, present for 6 months, previously treated with topical betamethasone. Medical history disclosed hypertension presently being treated with aspirin, diltiazem and enalapril. The skin showed an erythematous, eczematous and desquamative rash on extensor surfaces of forearms and legs, with fissuring and lichenification (Fig. 2). Differential diagnosis between enalapril-induced photosensitive eruption and lichen planus with a photosensitive distribution was entertained.

Patient 3. A 56-year-old male consulted because of an itchy rash on the face, neck and dorsal surfaces of forearms and hands, recur-



Figure 1 Exanthematous and desquamative dermatitis with photosensitive distribution is present on the forearm of a 74-year-old female patient under treatment with enalapril for hypertension.

ring for 2 years, with exacerbation in the last month and no improved with topical steroids. He had a history of hypertension under treatment with enalapril for the last 5 years. Cutaneous examination showed erythematous and scaling rash on the face, neck and forearms, with crusting from rubbing and scratching.

Agents acting on the renin-angiotensin system were the most frequently reported cardiovascular medications, responsible for 2.2% of 2224 spontaneously reported reactions to drugs in Italy between 1996 and 1997; 23.2% of those were exanthemas and 8.9% urticarias.⁸ In the United Kingdom, enalapril was involved in 696 of 15 527 adverse drug reactions in 1986.⁹

We have presented three cases of photoallergy with similar pictures, associated with ACEIs, mainly enalapril. The diagnosis was based on history, dermatological examination, the absence of other



Figure 2 Chronic eczematous lesions with lichenification and fissuring caused by enalapril-induced photoallergy observed in a 73-year-old male patient.

aetiologies, and the improvement observed between 2 and 6 weeks after omitting ACEIs. A rechallenge with enalapril plus sunlight exposure reproduced the skin rash and confirmed the diagnosis.

It has been proposed that, as captopril and enalapril have different chemical structures, no cross-reactions should occur among

them.^{5,6} However, it was interesting that patient 1 had an exacerbation of photoallergy when enalapril was substituted by captopril.

With regard to patient management, avoidance of all ACEIs, sunlight protection, protective clothing, sunscreens, topical high-potency corticosteroids, antihistamines and cold compresses were recommended. Antihypertensive treatment with alternative drugs was indicated. No skin lesions have occurred after 12, 7 and 4 months of observation respectively.

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