

Short Communication

Extensive allergic contact dermatitis from a topical enzymatic preparation (Noruxol®)

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Topical drugs are the 3rd most common cause of non-occupational allergic contact dermatitis in Italy (1). The nature of contact allergens in patients with chronic venous insufficiency varies between countries (2–5). Few reports exist on contact sensitivity to hydrocolloid dressings (6) or proteolytic (fibrinolytic, collagenolytic) enzyme preparations.

Case Report

A 77-year-old non-atopic woman, with chronic venous insufficiency of the lower legs and on treatment for hypertension with ASA, amlodipine, atenolol, zamilpril and hydrochlorothiazide, developed a very itchy erythematous, oedematous, exudative and crusted dermatitis of the legs. After 10 days, isolated erythematopapulovesicular elements, ranging in size from a grain of millet to a lentil, appeared on the forearms and trunk. In the previous 2 months, she had been treated for 3 venous ulcers of the legs, first with 10% povidone-iodine solution and then with clostridiopeptidase A (collagenase) ointment (Noruxol®). When the latter treatment was stopped, all lesions cleared within 15 days on oral betamethasone sodium phosphate and hydroxyzine.

6 weeks later, patch testing with the GIRDCA/SIDAPA standard series (FIRMA, Florence), a series of topical drugs including antiseptics and antibiotics, povidone-iodine 10%, Noruxol® ointment, as is, and its vehicle components (soft paraffin, white petrolatum) gave positive reactions (++) only to Noruxol® at day (D) 2 and D4. The ointment was negative in 40 controls tested for suspected contact dermatitis.

We report the case as an extensive allergic contact dermatitis from clostridiopeptidase A, the active ingredient of the wound-cleansing preparation.

Discussion

Clostridiopeptidase A is a bacterial collagenase copiously secreted by *Clostridium histolyticum* into the culture medium. This metalloenzyme containing zinc

cleaves major collagen types of the skin, namely type I and III, into small peptides, and also enhances macrophage chemotaxis and perhaps fibroblast proliferation (7). For these reasons, it has been widely used for many years as debrider in wound management.

Clostridiopeptidase is well tolerated and side-effects (pain and burning sensations, itch, reddening) are very rare (8, 9). Only 1 previous case of allergic contact dermatitis in a 75-year-old man with a post-traumatic ulcer on the right leg, and with concomitant sensitivity to many topical drug constituents, has been reported (10). In our case, only a positive patch test reaction to Noruxol® ointment, as is, was observed. This was definitely due to collagenase Knoll, because the vehicle components were negative. Nevertheless, it is unclear whether the positive reaction was caused by clostridiopeptidase A itself or the secondary proteases also present in the topical preparation.

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