

Occupational pustular allergic contact dermatitis

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Allergic contact dermatitis (ACD) can, beyond typical eczematous morphology, show various morphologies mimicking other diseases. We present a case showing pustular lesions following the use of industrial products containing methylisothiazolinone (MI) and methylchloroisothiazolinone/methylisothiazolinone (MCI/MI).

CASE REPORT

A 52-year-old woman with no relevant medical history, including no history of atopy, came to our clinic because of recurrent pustular lesions on an erythematous base on her wrists and the back of her hands (Figure 1A). She had experienced them for 1.5 years and they were sometimes itchy and painful. During this time, four rashes had occurred, which were treated with oral corticosteroids leading to resolution of the lesions within 2 weeks. The patient worked in a gas, plumbing and painting company and was in contact with various materials daily. She had been working there for 20 years and she often used cloth gloves whose palmar aspect and wrist area were made of plastic. Bacterial cultures were negative, and histology showed a follicular pustule amongst a dense neutrophilic infiltrate surrounded by acanthosis, compatible with chronic eczema (Figure 1B).

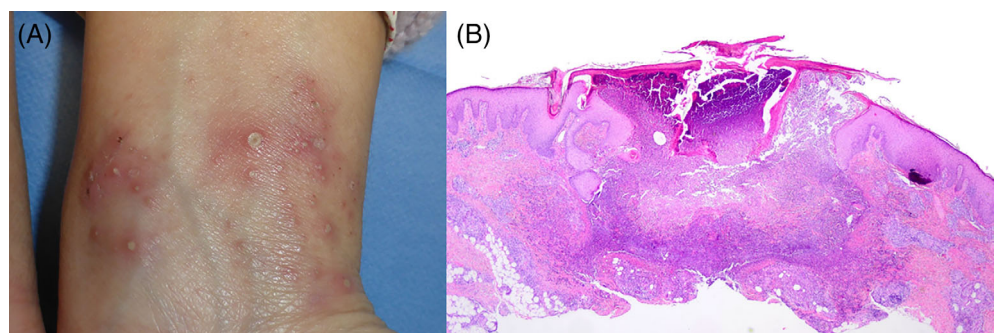
Patch tests were carried out with the Spanish baseline series, a plastics and glues series (Chemotechnique Diagnostics, Vellinge, Sweden)

and the patient's own gloves. Results were: ++ to MCI/MI, ++ to MI, and + to nickel at day (D) 2 and D4, without pustulation. The patient brought in the products she used at work and we confirmed the presence of MCI/MI and MI in the paints, lubricants, and adhesives, thus confirming the diagnosis of pustular occupational ACD to MI and MCI/MI. Of note, the patient also developed pustules on an erythematous base on her chest after electrocardiography in which a gel containing MCI/MI was used. Since then, the patient has been advised to avoid products containing the allergens.

DISCUSSION

We have found in the literature only scattered cases of pustular ACD due to various substances, such as minoxidil, merbromin, and fragrances. Hotta et al. reported a case and reviewed seven previously reported cases of pustular ACD.¹ We want to highlight the absence of pustules in the patch tests of three out of the five reviewed cases with a clinical presence of pustules. Isothiazolinones are preservatives widely reported to cause ACD, and occasionally reported to cause unusual clinical patterns. Regarding pustular morphologies, a case of acute exanthematous pustulosis-like ACD due to the use of a shower gel that contained MCI/MI and also a case of ACD masquerading as folliculitis decalvans

FIGURE 1 (A) Pustular lesions on an erythematous base on the wrists. (B) Follicular pustule amongst a dense neutrophilic infiltrate surrounded by acanthosis



due to the use of a hair gel containing MI have been reported.^{2,3} While isothiazolinones have been banned in leave-on cosmetics and a maximum concentration for rinse-off products has been established, there is no similar regulation for industrial products.⁴

In conclusion, we present an unusual case of pustular ACD caused by isothiazolinones. We consider it necessary to regulate the concentration of isothiazolinones in industrial products.

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