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CONTACT POINT

Long-lasting allergic contact dermatitis caused by methylisothiazolinone in wall paint: A case report

Marie S. Christiansen[1] | Tove Agner[2] | Niels E. Ebbehøj[1]

[1]Department of Occupational and Environmental Medicine, Bispebjerg Hospital, University of Copenhagen, Copenhagen, Denmark

[2]Department of Dermatology, Bispebjerg Hospital, University of Copenhagen, Copenhagen, Denmark

Correspondence
MD Marie S. Christiansen, Arbejds-og Miljømedicinsk Afdeling, Bispebjerg Hospital, Bispebjerg Bakke 23F, 2400 København NV, Denmark.
Email: marie.sturesson@hotmail.com

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The incidence of contact dermatitis caused by methylisothiazolinone (MI) has been increasing over the last decade.[1] MI, a preservative found in water-based paint, as well as in cosmetics and household products, differs from most other contact allergens with respect to its ability to be airborne. MI is a volatile substance and evaporates over a period of weeks. MI can be measured in the air for >42 days in rooms with newly painted walls.[2] A Danish study found that MI was present in 19 of 19 different wall paints, without any labelling warning against allergic reactions.[2]

CASE REPORT

In December 2016, a 27-year-old woman and her husband started renovating an old house. The couple used water-based wall paints and lacquered the floors. The woman used gloves and protective clothing, leaving only the face uncovered. Two days after starting painting, she developed itchy facial eczema, starting as swollen red lips, and gradually spreading to the nose and later to the cheeks. The woman moved back to the couple's old apartment. In week 3, she felt well and returned to the house. Within a few hours, the rash relapsed and she left the house. Later in the day and during the night, her face was slightly swollen. The next morning she had a sensation of swelling in her mouth and was treated with a systemic antihistamine and corticosteroids. Patch testing with the European baseline series gave positive reactions to MI and MI/methylchloroisothiazolinone (MCI), which were relevant with respect to the water-based paint used in the house. No MI or MI/MCI was found in the patient's cosmetics or household products.

She had no record of allergy, but had previously had eczema following the use of wet wipes and shampoo, in which MI is known to be a common preservative. Three months after the first symptoms, she spent a full day in the house. Symptoms occurred again, with a swollen face and rashes. Throughout the following months, various methods for removing the traces of MI from the house were tried. The heat was turned up, so that the MI could evaporate more quickly. A cleaning company washed the walls. A Genvex ventilation system, which replaces all air in the house once an hour, was installed. Despite this, the patient still had symptoms, and, 8 months after the couple took over the house, the woman was able to stay inside the house for a maximum of 1.5 days before reacting with relapse of the same symptoms.

DISCUSSION

A recent retrospective study of 44 similar cases showed that symptoms most commonly appear within 3 days, and that the median duration necessary to enable re-entering of a freshly painted room without recurrence of dermatitis was 5.5 weeks.[3] Three cases were reported to have symptoms for >22 weeks.[3] This report provides another example of long-lasting airborne contact dermatitis caused by MI, and suggests that residues of MI can stay airborne in homes for 8 months and more, even despite thorough efforts to eradicate the source.

Conflict of interest

The authors declare no potential conflict of interests.

ORCID

Marie S. Christiansen http://orcid.org/0000-0002-0952-2222

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