

Allergic contact dermatitis to a rubber assembly lubricant

Fátima Tous-Romero  | Alba Sánchez-Velázquez | María Penalba-Torres | Javier Ortiz de Frutos

Department of Dermatology, Hospital Universitario 12 de Octubre, Madrid, Spain

Correspondence

Ms. Fátima Tous-Romero, Department of Dermatology, Hospital Universitario 12 de Octubre, Avenida de Córdoba Madrid 28041, Spain.
Email: fatimatousro@gmail.com

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Methylchloroisothiazolinone/methylisothiazolinone (MCI/MI) and MI are commonly used antimicrobial preservatives in paints, detergents, and cosmetics. They are well-known to cause non-occupational or occupational allergic contact dermatitis (ACD).^{1,2}

CASE REPORT

A 43-year-old man presented with a 3-month history of hand eczema. He has been working in the rubber industry for 3 years. In the last 3 months, he has been experiencing hand eczema he associated with the use of a new rubber assembly lubricant in his job (LUB 13 ep2). He wore nitrile-coated gloves at work. On physical examination, he presented scaly erythematous plaques affecting both hands, more intense in the right, predominantly in the palmar area (Figure 1).

The patient was patch tested with the Spanish Contact Dermatitis Research Group (GEIDAC) baseline series in terms of the TRUE Test, supplemented with allergens obtained from Chemotechnique

Diagnostics, Vellinge, Sweden, applied in Finn Chambers (Epitest, Tuusula, Finland) on Omnifix E (Hartmann, Heidenheim, Germany) tape. The patch tests were applied on the upper back for 2 days. Readings were performed on day (D) 3 and D7. Patch test results were positive on D3 and D7 for MI (+++) and MCI/MI (+++).

The ingredients of the rubber assembly lubricant were checked. This product was classified with the hazard statements EUH 208 (may cause an allergic reaction), and included among its ingredients MCI/MI and MI.

After avoiding contact with the assembly lubricant, complete resolution of the eczema was achieved, with no further recurrences. Hence, occupational ACD caused by MCI/MI and MI contained in the rubber assembly lubricant was diagnosed.

DISCUSSION

Isothiazolinones are antimicrobial agents and have been used as preservatives in both consumer and industrial products since the early 1980s. MI (CAS no. 2682-20-4) and its mixture with MCI (CAS no. 26172-55-4) are ubiquitous allergens, found in various products, including those used in industrial maintenance. In recent years, the prevalence of contact allergy to isothiazolinones has reached epidemic levels. The latest EU Cosmetic Regulation allowed the use of MCI/MI and MI only in rinse-off cosmetics at a maximum concentration of 15 ppm (0.0015%).^{1,2} In the literature, we found several cases of occupational contact allergic eczema caused by isothiazolinones.³⁻⁶ In a Danish study, painters, blacksmiths, machine operators, and cosmetologists had a high risk of developing MCI/MI allergy, whereas tile setters/terrazzo workers, machine operators, and painters were significantly susceptible to MI sensitization.⁶

We herein described a new case of occupational allergic contact eczema caused by isothiazolinones. Despite being known allergens, they remain common components of products used at work (lubricant in this case). We thus emphasize the importance of understanding



FIGURE 1 Scaly erythematous plaques in the patient's right hand

their possible role in occupational contact dermatitis, with the legal implications that this entails. The use of appropriate protective equipment is therefore essential to avoid contact with sensitizing products.

CONFLICT OF INTEREST

None declared.

ORCID

Fátima Tous-Romero  <https://orcid.org/0000-0002-3904-3396>

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