

Short Communication

Airborne contact dermatitis due to chloroacetamide in wall paint

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Chloroacetamide, a colourless and odourless powder, is an industrial preservative also used in cosmetics (1–5), glue (5–7), leather, shoe polish and industrial oils (4).

Case Report

A 59-year-old man presented with itchy, symmetrical, red, scaly oedema of the eyelids, related to using a certain emulsion wall paint. A different wall paint did not elicit the same symptoms. Topical corticosteroid promptly relieved the condition.

Patch testing showed a ++ reaction to wall paint both as is and at 10% pet., and a + reaction at 1% pet. Prick testing on the forearm with wall paint as is gave a +++ reaction at D2. An open test to chloroacetamide (Mergal KM 109, Troy Chemical Company BV, Seelze, Germany; 0.30% aq.), supplied by the manufacturer, elicited a +++ reaction at D2 and D3. All other patch tests to the standard series, a preservatives series and the other wall paint, without chloroacetamide, were negative.

Discussion

Contact allergy to chloroacetamide was first described in 1971 (1), and has been reported at extremely low concentrations (8). It has caused allergic contact dermatitis in cosmetics, such as baby lotion (1), bath oils, shampoo (4), hand lotion (2), facial cleanser (3), moist toilet paper and massage cream (5), cutting oils (4, 9), glues (6, 7), nylon spin finish (10), and wall paints (11, 12). 10% of house painters with active hand eczema reacted to chloroacetamide on patch testing (11).

To our knowledge, this is only the 2nd report of chloroacetamide in wall paint as the cause of airborne contact dermatitis (12). More recently, the preservative mixture of methylchloroisothiazolinone and methylisothiazolinone in emulsion wall paints has similarly been reported (13).

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References

1. Nater J P. Allergic reactions due to chloroacetamide. *Dermatologica* 1971; 142: 191–192.
2. Suhonen R. Chloroacetamide – a hidden contact allergen. *Contact Dermatitis* 1983; 9: 161.
3. Klaschka F. Contact allergy to chloroacetamide. *Contact Dermatitis* 1975; 1: 265–266.
4. Hjorth N. N-methylol-chloroacetamide, a sensitizer in coolant oils and cosmetics. *Contact Dermatitis* 1979; 5: 330–334.
5. Doooms-Gossens A, Degreef H, Vanhee J, Kerkhofs L, Chrispeels M T. Chlorocresol and chloroacetamide: allergens in medications, glues and cosmetics. *Contact Dermatitis* 1981; 7: 51–52.
6. Pedersen N B, Fregert S. Occupational contact dermatitis from chloroacetamide in glue. *Contact Dermatitis* 1976; 2: 122–123.
7. Pereira F, Rafael M, Pereira M A. Occupational allergic contact dermatitis from a glue, containing isothiazolinones and N-methylol-chloroacetamide, in a carpenter. *Contact Dermatitis* 1999; 40: 283–284.
8. Marzuli F N, Maibach H I. Antimicrobials: experimental contact sensitization in man. *J Soc Cosmet Chem* 1971; 24: 399.
9. Lama L, Vanni D, Barone M, Patrone P, Antonelli C. Occupational contact dermatitis to chloroacetamide. *Contact Dermatitis* 1986; 15: 243.
10. Savage J. Chloroacetamide in nylon spin finish. *Contact Dermatitis* 1978; 4: 179.
11. Wahlberg J E, Hogberg M, Skare L. Chloroacetamide allergy in house painters. *Contact Dermatitis* 1978; 4: 116–117.
12. Finkbeiner H, Kleinhans D. Airborne allergic contact dermatitis caused by preservatives in home-decorating paints. *Contact Dermatitis* 1994; 31: 275–276.
13. Hausen B M. Aerogene Kontaktdermatitis durch (Chlor)-Methylisothiazolinon (Kathon CG) in Wandfarben. *Akt Dermatol* 1999; 25: 9–14.

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