

Allergic contact dermatitis from methylene-bis-benzotriazolyl tetramethylbutylphenol (Tinosorb M[®])

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Despite the widespread use of sunscreens, contact and photoallergic contact reactions to them are uncommon, benzophenone-3 being the most frequently involved allergen (1, 2). We report a case of allergic contact dermatitis from methylene-bis-benzotriazolyl tetramethylbutylphenol (Tinosorb MTM; Ciba Specialty Chemicals, Basel, Switzerland), an organic UV filter available in cosmetic sunscreens in recent years (2, 3).

Case Report

A 54-year-old woman presented in January 2005 with a 3-month history of a persistent facial dermatitis mainly involving her forehead and both cheeks. For the previous 6 months, she had regularly used a tinted sunscreen cream (tinted Avene 20 cream; Laboratoires Avène, Paris, France). She was patch tested with the GEIDC standard series and the sunscreen cream. Positive reactions (++) were seen at D2 and D4 to nickel 5% pet. and the sunscreen itself. After obtaining the components of the sunscreen cream, she was patch and photopatch tested (7.5 J/cm²) with these substances and with a sunscreen series (Chemotechnique, Malmö, Sweden). A positive allergic response to methylene-bis-benzotriazolyl tetramethylbutylphenol 2% pet. was seen at D2 and D4, of equal intensity in both the patch and the photopatch test sites. This substance was patch tested in 20 control patients, with

uniformly negative results. The facial dermatitis did not recur after discontinuing use of the sunscreen cream.

Discussion

Methylene-bis-benzotriazolyl tetramethylbutylphenol is a photostable UVA filter that also has a strong absorption in UVB (max 305 and 360 nm). It is in the first class of sunscreens that combine the benefits of organic and inorganic filters. It comes as microfine organic particles with a diameter of 100–200 nm; therefore, it not only absorbs UV but also scatters and reflects it (3).

In the present case, positive results of equal intensity with both patch and photopatch testing of methylene-bis-benzotriazolyl tetramethylbutylphenol indicates simple contact allergy to this substance and not a contact-photocontact allergy. No concomitant reactions were seen with other UV filters. We have not found previously published case report of allergic contact dermatitis to methylene-bis-benzotriazolyl tetramethylbutylphenol although it is currently present in numerous sunscreens on the market. Possibly, its high molecular weight (MN 650) hinders its penetration through the skin (3, 4).

References

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