

many washes and was thus able to cause pigmented contact dermatitis in our patient.

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Occupational contact dermatitis from anethole in food handlers

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Case Reports

Case no. 1.

A 39-year-old woman presented with dermatitis on both hands, which had resisted treatment for 20 years, and clearly worsened at work, where she cooked traditional Seville cakes. Lesions spread up the forearms, and rhinitis and blepharitis occurred whenever she entered the cake factory. Her IgE level was normal. Patch tests with the GEIDC standard series, fragrances, plants, cake ingredients (flour, yeast, sugar, honey, salt, anise oil and sesame) were performed, with a ++ reaction only to anise oil (5% o.o.) at 2 and 4 days. Anethole, the main component of anise oil, gave a ++ reaction in the patient at 5% pet. on D2 and D4.

Case no. 2.

A 38-year-old woman, who worked at the same cake factory as case no. 1, presented with severe dermatitis on the hands, forearms, scalp and face. Rhinitis and blepharitis broke out as soon as she entered the factory, even before she handled the products. She also had psoriasis on the knees and elbows. Her IgE level was normal. Patch tests with the GEIDC standard series, fragrances, plants and cake ingredients were positive at 2 and 4 days to Kathon® CG (++), anise oil (5% o. o.) (++), anethole (5% pet) (+) and Roman chamomile (+++).

Discussion

Anethole is the main component of anise, star anise and fennel oils. It is commonly used in the food and cosmetic industries, particularly in soaps and toothpastes, as a sensitizer in bleaching colours in colour photography, and as an imbedding material (1). Anethole, 1-methoxy-4-(1-propenyl)benzene (C₁₀H₁₂O), is chemically similar to eugenol, though there is no cross-reaction between them (2). In a human maximization test, anethole 2% pet.

produced no sensitization, and the maximum concentration of anethole in final products is about 0.25% (1). Star anise, in contrast, when patch tested at 1–2%, actively sensitized 5% of the patients tested; however, it also contains α -pinene, limonene and safrole, as well as anethole (3). It is used in many toothpastes, and is sometimes responsible for intolerance to them (4).

There are few publications on allergic contact dermatitis from anethole, and it usually presents as intolerance to toothpaste (1, 5). Our cases appear to be the first reports of allergic contact dermatitis from anethole in food handlers.

Kathon® and chamomile allergy in the 2nd case had a cosmetic origin, related to a shampoo with herbal extracts containing both. Though some authors report a high frequency of Roman chamomile sensitization, we could find only 2 case reports in relation to drug reactions. However, there is much confusion between the 2 types of chamomile (Roman and German), which some publications fail to clarify (6, 7).

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