

Chelitis from contact allergy to citral in lip salve

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Case Report

A 30-year-old lady presented with a 5-year history of recurrent chelitis. She was patch tested to our face series, flavours series, bakery series, her own toothpaste, her own nail varnish, her own lip products, and the standard series including fragrance mix II. She had positive reactions to fragrance mix (+), fragrance mix II (++), tosylamide formaldehyde resin (++), cinnamaldehyde (+), oil of lemongrass (2% pet.) (++) and her own nail varnish (++) and 'petroleum' (+). She subsequently had a positive reaction (++) to citral (2% pet.) in the breakdown of fragrance mix II.

Although the patient had reported applying 'petroleum' (normally yellow soft paraffin) to her lips, when

the product was examined it was found to be Vaseline® lip balm with aloe vera. Of note, citral is listed as an ingredient on the packaging. Changing to plain Vaseline® and avoidance of perfume and nail varnish resulted in symptomatic improvement.

Discussion

Citral (3,7-dimethyl-(2,6)-octadienal) is classified as one of the terpene aldehydes, which are naturally occurring, plant-derived compounds. It occurs as a mixture of the two geometric isomers, geranial and neral, in nature (1). Citral is found in many essential oils with strong lemon odours including oil of lemongrass where it constitutes 75–85% of the material (1). It is a widely used fragrance and flavour material with a strong lemon-like odour and a characteristic bittersweet taste (1). It is recognized both as an allergen and as an irritant (1). Previous studies (2, 3) have shown 1.1% of consecutively patch-tested patients, and 4.3% of patients with hand eczema were patch-test positive to citral (2% pet.).

Citral 2% in pet. frequently gives weak false-positive reactions (1), but this is unlikely here as the reactions were strong and occurring consistent with both the allergen itself, fragrance mix II, and the oil of lemongrass.

Fragrance mix II has recently been added to the standard series, and by testing with this, it has enabled us to identify citral as the cause.

This case illustrates the importance of checking the patient's own products as they may not be exactly as reported. There are many products in the Vaseline® range including the original yellow soft paraffin product. It also shows the benefit of full fragrance listing on the packaging of cosmetics, which became a requirement in March 2005 under EU legislation. This enabled us to link the positive patch test to citral to a product that the patient was using.

References

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