

SHORT COMMUNICATION

Pigmented Contact Dermatitis Secondary to Benzyl Salicylate

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Benzyl salicylate is the fifth most common fragrance-related ingredient found in cosmetics and toiletries in the USA (1). Pigmented contact dermatitis (PCD) is a non-eczematous variant of contact dermatitis (2). We report here a case of PCD caused by benzyl salicylate.

CASE REPORT

A 74-year-old woman presented with a 2-month history of worsening non-pruritic pigmented patches over the face. In addition to the usual toiletries and make-up, she had started using a new brand of commercial face wash in the last 2 months. She had no personal or family history of atopy.

On examination, there were hyperpigmented patches, symmetrically distributed over her forehead and cheeks with relative sparing of the nose. The margins on the lateral cheeks were well-delineated (Fig 1). Differential diagnoses considered included pigmented contact dermatitis and melasma. The clinical appearance, the patient's age and short history were considered less typical for melasma. Since she had no inflammatory component or eczematous component prior to the facial pigmentation, post-inflammatory change was not considered.

Patch tests were performed with our department's standard series, cosmetic series and the patient's own products using the IQ chamber[®] (Chemotechnique Diagnostics AB, Vellinge, Sweden). Patches were removed from the back after day 2 and readings were performed on day 3, according to the International Contact Dermatitis Research Group guidelines. The patch tests showed positive reactions to colophonium (+), nickel sulphate (+), potassium dichromate 0.5 % (+), fragrance mix I (+) and benzyl salicylate (+). The patient also showed a positive reaction to her own face wash (+), which was tested "as is" and contained benzyl salicylate. In addition, both the positive reactions to benzyl salicylate and the face wash showed a similar appearance of brownish hyperpigmentation. Patch test to face wash was not performed in controls.

She was asked to avoid the face wash and was advised on skin protection measures, with sunscreen daily, 4% hydroquinone cream applied twice a day. The patient has reported almost

complete clearance of facial pigmentation, since stopping the face wash 3 months ago.

DISCUSSION

In 1917, Riehl melanosis was used to describe a dark-brown pigmentation on the forehead, temporal and zygomatic regions, especially in darker skin types (Fitzpatrick Skin type IV–VI). Initially, it was thought to be a type of malnutrition disorder like pellagra, but more recently, it is considered to be synonymous with PCD (2). The common allergens implicated in Riehl melanosis include fragrances and fragrance fixatives, such as benzyl salicylate in cosmetics.

The term "pigmented contact dermatitis" was coined by Osmundsen in 1970, who described an epidemic of melanosis in Copenhagen (3). Through systematic patch testing and photopatch testing Nakayama et al. (4) found the common causative fragrance materials including benzyl salicylate, and other fragrances.

Prior to the 1970s, benzyl salicylate was one of the common causes of PCD in Japan. In the late 1970s, major cosmetic companies reduced the usage of benzyl salicylate in their products and, since then, the incidence of PCD has decreased remarkably (5).

Benzyl salicylate is starting to reappear in some toiletries and cosmetics. Some of these are marketed as herbal products and the benzyl salicylate is utilized as a fragrance fixative. There needs to be a continued awareness of the potential risk of PCD, especially in darker skin types where the pigmentation can be very marked, as in our patient. Sometimes, the pigmentation may be persistent despite avoidance of the allergen.

The authors declare no conflicts of interest.



Fig. 1. (a) Hyperpigmented patches on the temporal, forehead and zygomatic areas, with sparing of the nose and perioral area. (b) Hyperpigmented patches with delineated margins on the right cheek.

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