

Allergic contact dermatitis from prime yellow carnauba wax and coathylene in mascara

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Case Report

A 21-year-old woman presented with a 1-year history of a bilateral scaly rash on both upper and lower eyelids. This had initially started as swelling and scaling of the upper eyelids and then spread to the lower eyelids over a 6-month period. There was no personal or family history of atopy. There was no occupational history of note.

Patch testing, using Finn

Chambers, was performed with the European standard and a medicaments series (Chemotechnique, Malmö, Sweden), and her own eye cosmetics including no. 7 Mascara Ultimate® (Boots, Nottingham, UK) and its constituents. Positive reactions were seen at D2 and D4 to no. 7 Mascara Ultimate (+), prime yellow carnauba wax 50% mineral oil (+) and coathylene 10% pet. (+). Patch testing in 15 controls was negative.

Comment

Our patient was allergic to 2 components of her mascara including carnauba wax and coathylene. Prime yellow carnauba wax is a mixture of mainly esters, wax acids and alcohols (1). It can be obtained from South American palm trees and is a solid that becomes fluid when rubbed in a circular motion. It is found in old phonograph records, furniture, shoe and floor waxes, candles, electrical insulation, cosmetics, lipsticks and cologne sticks. Skin sensitization or irritation is very infrequent. Coathylene is a low density polyethylene. This is not generally a skin irritant but may cause some irritation at

temperatures above 60°C as stated in the material safety data sheet. No reports of allergic contact dermatitis from either of these substances in cosmetics were noted in the literature. This report highlights these ingredients as rare but important causes of allergic contact dermatitis in cosmetics and particularly eye products such as mascara.

Acknowledgement

I am grateful to Boots for their prompt assistance in providing the ingredients for patch testing in this case.

References

1. Rietschel R L, Fowler J F. *Fisher's Contact Dermatitis*, 5th edn. Philadelphia: Lippincott Williams & Wilkins, 2001: 750.

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