

CONTACT POINTS

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Allergic contact dermatitis from phthalic anhydride/trimellitic anhydride/glycols copolymer in nail varnish

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Key words: allergic contact dermatitis; cosmetics; glycols copolymer; nail varnish; phthalic anhydride; trimellitic anhydride.

Case Report

A 33-year-old woman presented with a 2-month history of an intermittent itchy rash on the neck and around the eyes, associated with episodes of swelling of the eyelids. Each flare had settled to leave scaling. There was no history of atopy. She admitted to wearing cosmetics and applying nail varnish regularly. She worked in an office environment. On examination, there was mild erythema and scaling over the upper eyelids and neck.

Patch testing was performed to the British standard series (1) and modified cosmetic (Chemotechnique) and modified plant (Chemotechnique) series as well as to her cosmetics and nail varnish. She had a positive reaction (+) to her nail varnish at 2 and 4 days, which was applied to a Finn Chamber and allowed to dry before application. She did not react to tosylamide/formaldehyde resin in the facial series. Patch testing was per-

formed with the nail varnish components provided by the manufacturer. She had a positive reaction (+ +) to phthalic anhydride/trimellitic anhydride/glycols copolymer 1% pet. at 2 and 4 days. Also, she had reactions (+) to the 5 colouring bases that also contained this ingredient. 12 control subjects were negative.

Discussion

Contact allergy to nail varnish was first described in 1925 by Miller & Taussig (2). The majority of reactions elicit dermatitis of the head and neck, especially around the eyes. These reactions are commonly caused by allergy to tosylamide/formaldehyde resin. Other reported allergens include formaldehyde, nitrocellulose, guanine, polyester resin, acrylates, acetates and pigments (3, 4). It is important to allow nail varnish to dry before patch test application, to avoid an irritant reaction.

Phthalic and trimellitic anhydrides are both low molecular weight acid anhydrides, used as epoxy hardeners. Phthalic anhydrides are also used in the production of phthalate plasticizers. Trimellitic anhydrides are also used in the production of adhesives, polymers, dyes and printing inks. They have both been well documented as causing respiratory irritancy and allergy mediated via specific IgE antibodies (5). Allergic contact urticaria (6) and contact dermatitis (7) have been described following airborne exposure in factory workers. We are not aware of any previous reports of contact allergy to phthalic anhydride/trimellit-

ic anhydride/glycols copolymer in nail varnish. The manufacturers have had no further cases reported.

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