

Short Communications

Eyelid dermatitis from methacrylates used for nail enhancement

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Key words: allergic contact dermatitis; (meth)acrylates; nail overlays; cosmetics; eyelids. © Munksgaard, 1998.

Nail varnish reactions are well-known (1-3) and, with rare exception (4), are found on skin away from the nails, especially the eyelids; the nail beds are unaffected. Such reactions are commonly (though not exclusively) (4) caused by allergy to toluenesulfonamide-formaldehyde resin (5-7), which has caused at least 1 manufacturer to exclude that ingredient from its formulations.

Some patients with artificial nail reactions to cyanoacrylate have had involvement of distant sites, including the eyelids (8), but eyelid dermatitis has not been a constant or reliable component of the pattern. Artificial nails are also produced with methacrylates, with or without ultraviolet light.

Case Report

A 45-year-old woman presented with dermatitis of the upper and lower eyelids, which had been present intermittently for several years. She was already known to be allergic to quaternium-15 and to poison ivy. She garden-ed and wore cosmetics on her face and eyelids. Her nail care involved the use of several nail varnishes and nail enhancement with a "liquid and a powder" mixed to form a nail cover. This was used to produce a "nail overlay", which is a cover that does not extend beyond the end of the normal nail. Such applications were followed by fortnightly applications of the same product as a nail filler (to prevent detection of the raised overlay contrasted with the (depressed) normal nail surface). Further questioning revealed a history of a transient paronychia of the proximal nail folds of several nails, which had long since cleared.

On examination, there was a mild but definite eczema of the medial aspect of both upper and lower eyelids. The nails were varnished, and the skin of the fingers and hands was normal. The nails and nail beds were uninvolved. Patch testing revealed a +++ reaction to methyl methacrylate 2% pet., ++ to triethylene glycol trimethacrylate 2% pet. and ethylene glycol dimethacrylate 2% pet., and + to balsam of Peru. Tests to all of her cosmetics, nail varnishes and toluenesulfonamide-formaldehyde resin, as well as the European standard series, were negative, except for 1 eyelid concealer which gave a + reaction at 2 days.

The patient removed her nail overlays with ordinary polish remover, and the eyelids cleared in 3 to 4 days.

Discussion

Nail enhancement comprises many techniques, and the one used is chosen by the nail technician for its utility and facility of application. Nail overlays cover the natural nail plate; nail sculpturing extends the artificial nail beyond the natural nail plate; nail wraps employ a fabric that is wet with an adhesive; photobonding uses light activation for polymerization; (artificial) nail tips are fixed to the natural nail with an adhesive (usually cyanoacrylate or methacrylate). Methacrylates are used with and without light, most being applied as a liquid (monomer) and a powder (polymer). Products are often a mixture of components, so it is important to test to a series of acrylates that might be in the product. Use of methyl methacrylate nail products can be suspected by a strong odor at the time of application, very brittle nature, resistance to removal with polish remover, and difficulty in filing the nails following application (9). Her history was negative for all these criteria. The patient works for a large group of orthopedic surgeons, but is not exposed to methyl methacrylate. The reaction is perhaps to another product or (more likely) is a cross-reaction to a monofunctional acrylate. Usually, reactions to products used for nail enhancement present around and under the fingernails, but this patient's problems were limited to her eyelids, a common pattern for nail lacquer reactions but not for those caused by acrylic nails.

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Immediate hypersensitivity to sesame in foods and cosmetics

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Key words: sesame; immediate allergy; contact urticaria; cosmetics; foods. © Munksgaard, 1998.

Sesame is well-known to induce contact sensitivity when used in ointments or cosmetics. Reports of immediate allergy and anaphylaxis due to ingested sesame seed or sesame oil have been published with increasing frequency (1).

Case Reports

A non-atopic 33-year-old surgeon presented with recurrent attacks of generalized urticaria for 5 years, occurring with Chinese food, hamburgers and appetizers. He also complained of urticaria when in contact with certain of his wife's cosmetics: lipstick and moisturizing cream (L'Oréal, France). Sesame seed and oil were suspected. Prick tests were performed with food extracts (Stallergènes, France), sesame seed crushed and diluted in physiological serum, as well as open tests with the lipstick and the cream (Table 1). These 2 products both contained sesame oil. The patient did not want any further investigations.

The second patient was a non-atopic 30-year-old man working in the industry. He gave a 3-year history of attacks of generalized urticaria when eating hamburgers made with sesame buns, appetizers and tomato sauce. As he suspected sesame, he avoided all foods with vegetable oil or sesame as an ingredient. Occupationally, he came into contact with a body oil (Laboratoire Vichy, France) on his hand. An extensive contact urticaria ap-

peared immediately. This oil was known to contain sesame seed oil.

Discussion

Immediate allergy to sesame seed was first described in 1950 by Rubenstein. The incidence of sesame allergy appears to have increased recently. Sesame seed and sesame oil are included in a number of foods, especially vegetarian or exotic. Sesame oil is present as vegetable oil in several foods. Immediate allergy to sesame is characterized by its severity with high risk of anaphylaxis (2, 3). Occupational hypersensitivity to sesame seed, with asthma, has also been reported in the baking industry (4).

Despite wide use in cosmetics, only 1 other case with immediate reactions induced by sesame oil present in cosmetic products has been reported, to our knowledge (5). Physicians should be aware of this new cause of immediate hypersensitivity and inform patients allergic to sesame to avoid not only foods, but also cosmetics and drugs that may contain it.

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Table 1. Prick and open test results

Case no.	Prick tests		Open tests		RAST (Pharmacia)
	sesame food extract	crushed sesame seeds	own products	sesame oil	
1	–	++	++	NT	–
2	–	++	++	++	–