

Short Communication

Contact allergy to quaternium-22 and shellac in mascara

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A 29-year old woman was seen with a 9-month history of swelling and itching of the upper eyelids, predictably within 2 days of using a particular mascara first purchased at the onset of her symptoms. She could wear other eye make-up (including both eyeshadow and mascaras) without any problem. There was no personal or family history of atopy.

Patch testing was performed to the TRUE Test™, as well as to a cosmetic ingredient series (Chemotechnique). All patches were applied with IQ Chambers, removed at 2 days (D), and read at D3. At D3, there was only a + reaction to nickel sulfate. Although nickel can be an occasional contaminant in eyeshadow, the patient reported no problem when she wore her eyeshadow without the offending mascara, and this test result was therefore deemed irrelevant. At the same time, she was patch tested to the suspected mascara: at D3, there was a +++ reaction to it.

The individual ingredients were then obtained from the manufacturer of the mascara at the concentrations

used in the product. At D3, there were +++ reactions to shellac (20% eth.) and quaternium-22 (0.1% aq.). Quaternium-22 0.01% aq. still gave a +++ reaction at D3. The patient's problem disappeared with avoidance of the mascara and has not recurred. 23 control subjects patch tested to shellac (20% eth.) and quaternium-22 (0.01% and 0.1% aq.) were negative at D3, except for 1 very weak + reaction to shellac.

1 previous case report of allergic contact cheilitis from lipstick due to shellac has been found, but no previous reports of contact allergy to quaternium-22 (3-(D-gluconoylamino)propyl(2-hydroxyethyl)-dimethylammonium chloride; CAS 51812-80-7).

References

1. Rademaker M, Kirby J D, White I R. Contact cheilitis to shellac, Lanpol 5 and colophony. *Contact Dermatitis* 1986; 15: 307-308.