



Music and matrimony – hazards for the colophonium allergic patient

JM Batchelor • PM Todd

Department of Dermatology, Addenbrooke's NHS Hospital Foundation Trust, Cambridge CB2 0QQ, UK

Correspondence to: JM Batchelor. E-mail: jonathan.batchelor@addenbrookes.nhs.uk

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Reviewer

Anne-Marie Skellett

We describe a case of colophonium contact allergy, manifesting as a facial rash. Careful questioning revealed several possible sources of colophonium exposure including one not yet described in the literature.

Case report

A doctor presented with a two-year history of episodes of reddened skin on his cheeks. The left cheek was affected more severely, with small blisters arising occasionally. Examination during an acute episode revealed hot, swollen, erythematous skin on both cheeks, but no vesiculation or pain. Antinuclear antibodies, serum IgE and radio-allergosorbent tests to house dust mite and latex proteins were all negative or normal. However, there was a raised anti-DNAse B titre of 480 (normal range <85). Treatment was given for presumed recurrent streptococcal cellulitis with phenoxymethylpenicillin 500 mg four times daily for one week, followed by a prophylactic dose of 500 mg twice daily. However, during the prophylactic antibiotic course, the patient presented with a strip of dusky erythema on the left cheek, which had appeared overnight. The anti-DNAse B titre was only 120. Changing the phenoxymethylpenicillin to clarithromycin had no effect, but the erythema resolved a few days later. On further questioning it transpired that the patient played the 'cello, including on the evening before the rash had recurred, and had used rosin on the 'cello bow. He had reacted to sticking plasters previously. The rash had been worse after his recent wedding, where many female guests wearing lipstick had kissed him on the cheek, and recurred on their honeymoon, when his wife was wearing lipstick and nail varnish. In research work he had been using slide mounts based on xylene, gum arabic and glycerol but none containing colophonium.

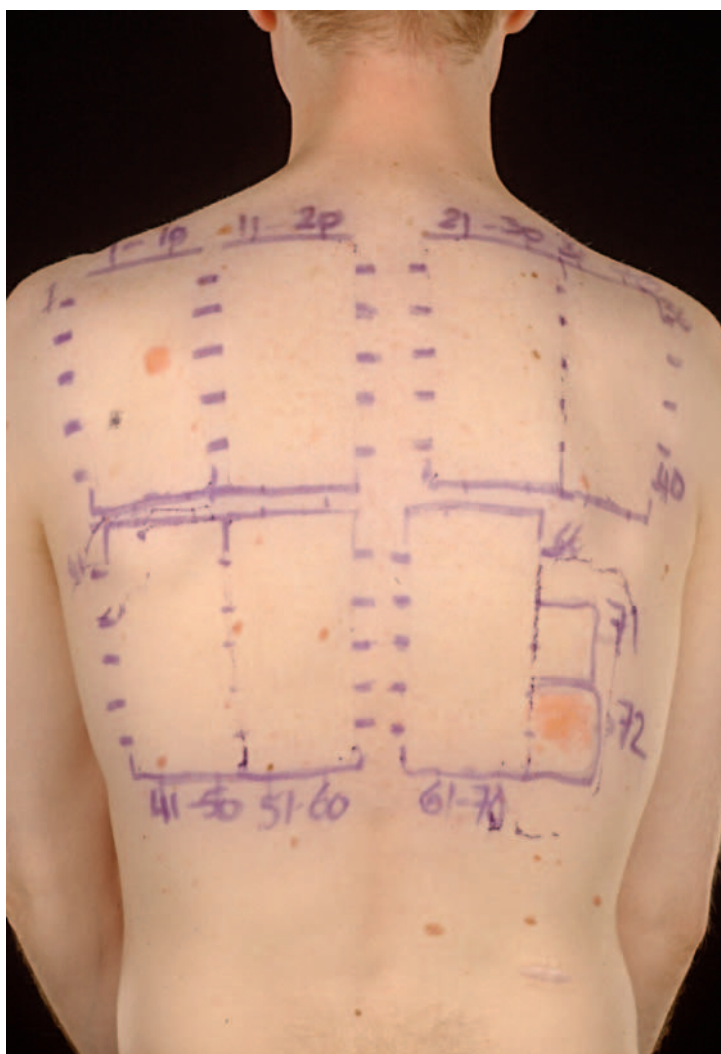
He had also used nail varnish during slide preparation. There was a presumed family history of colophonium allergy: his sister had a severe reaction following eyebrow waxing and his father had reacted to sticking plasters.

The patient was patch tested to the European baseline series and a sample of his own rosin. International Contact Dermatitis Research Group (CDRG) reading criteria were used on day 2 and day 5 after application. Positive reactions were seen to colophonium (CDRG ++: strong positive reaction; red, swollen skin with individual small water blisters) and the patient's own rosin (CDRG +++: extreme positive reaction; intense redness and swelling with coalesced large blisters or spreading reaction) on day 5 of testing (Figure 1). From that time, the patient avoided colophonium-containing products and discontinued antibiotics. On review two years later, he had experienced no further recurrences of the facial rash.

Discussion

Colophonium (colophony) allergy is well-described in musicians, particularly those who play string instruments.¹⁻³ Unmodified colophonium (rosin) is derived from the resin of coniferous trees. It is applied to the bow of string instruments to increase friction between the bow and strings and hence improve sound generation. Rubbing rosin on the bow generates a fine dust which may cause dermatitis on the hands or an airborne contact dermatitis on the face and neck, as in our patient. We assume that our patient developed redness on his left cheek because of the tendency of 'cellists to hold the neck of the instrument near their left cheek, leading to a greater degree of exposure to rosin dust. Abietic acid and its derivatives are thought to be the principal sensitizers in colophonium³ and these are found in varying

Figure 1
Positive reactions to colophonium (++, at position number 8) and the patient's own rosin (+++, at position number 72) on D5 of patch testing



concentrations in different brands of rosin, so musicians with colophony allergy may be able to find a brand of rosin which is less likely to precipitate dermatitis.

Colophonium is used in the manufacture of lipsticks as a pigment fixative and to improve texture.⁴ It may also be present in other cosmetics, including nail varnish,⁵ although it is used less commonly nowadays. Contact allergy to colophonium in lipstick has been described, but only in those wearing the lipstick on their lips.⁴

The term 'connubial dermatitis' refers to dermatitis caused by indirect exposure to substances through physical contact with one's spouse. The contact is not necessarily sexual; there are reports of connubial dermatitis arising simply from sharing a household or a car.⁶ Potential allergens include topical drugs,⁷ fragrances⁸ and hair dyes.⁹ We are unaware of any reports of a connubial dermatitis arising in a patient exposed to their spouse's lipstick, or indeed to the lipstick of many members of a wedding party!

We know that the patient did not play his 'cello for a week before the wedding, so this potential source of colophonium is excluded. Given that the recurrence of the rash coincided with the patient's contact with lipstick in the absence of rosin exposure, it seems likely that the patient was exposed to colophonium in the lipstick worn by the bride and some of the guests. Moreover, the patient's rash has not recurred since he has been avoiding colophonium, so it seems likely that this is the allergen responsible for the rash.

Our patient had a presumed family history of colophonium contact allergy. Although there are many references in the literature concerning family history of nickel allergy, there are very few relating to family history of colophonium contact allergy. However, Lidén *et al.* reported that certain HLA antigens seem to be positively associated with certain allergies, with colophonium allergy being positively associated with HLA B27.¹⁰

This case demonstrates an unusual presentation of colophonium allergy as a recurrent facial rash following exposure to both 'cello rosin and lipstick. This occurred on the background of a presumed family history of colophonium allergy, which is rarely reported in the medical literature. The case also demonstrates the importance of considering contact dermatitis as a potential diagnosis in a patient presenting with an atypical facial eruption and the value of patch-testing in these situations.

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