

After then failing a trial of dapsone due to anaemia, the patient was commenced on a course of 4.5-mg nicotine lozenges once daily. Within 4 days of starting NRT the patient's complex aphthosis began to regress, with symptomatic improvement. The course of NRT was continued and oral aphthous ulceration completely resolved within 2 weeks. To prevent dose-associated light-headedness, the patient's regime was altered to 3 doses of 1.5-mg nicotine taken over 90 minutes once daily. The patient has now been ulcer free for 6 months with no associated adverse effects.

Our case demonstrates the potential therapeutic challenge in treating RAS and the novel alternative treatment of NRT. While NRT obviously remains an unconventional treatment for RAS, some evidence does exist to support its therapeutic role. Not only has a reduced incidence of oral aphthous ulceration been described among smokers compared to non-smokers²⁻⁴ but the development of RAS upon smoking cessation in smokers has also been documented.⁵⁻⁷ In terms of NRT in RAS, treatment has been described only twice previously.^{8,9} In 1991, Bittoun described three non-smoking patients with RAS who were successfully treated with four 2-mg Nicorette chewing tablets (GlaxoSmithKline, London, UK) per day for 1 month.⁸ Then in 2010, Hill and colleagues described a patient with both oral and genital aphthosis who responded to nicotine lozenges.⁹ The initial dose was 15-mg daily, which was then tapered over a 12-week period, with no adverse effects noted.

It has subsequently been proposed that nicotine plays a protective role in aphthous ulceration by increasing the keratinisation of the oral mucosa, thus improving overall mucosal defence against microbial agents and mechanical trauma.¹⁰ At the molecular level, nicotine has been shown to promote cellular adhesion, epidermal integrity, angiogenesis, wound healing and decreased inflammation by upregulating vascular endothelial growth factor expression and modulating local immune responses to proinflammatory mediators.¹¹

In terms of safety, although NRT can cause adverse effects similar to those associated with cigarette smoking, nicotine lozenges have not been shown to result in any serious adverse effects at recommended doses.¹¹ However, excessive consumption in non-smokers can result in dependence, gastrointestinal upset, faintness and headaches.¹¹

In conclusion, we recommend considering the use of NRT in patients with RAS where typical treatments have failed and also in patients where the adverse effects of more potent systemic therapies need to be avoided. Nicotine lozenges are easily accessible to patients over-the-counter at pharmacies and supermarkets in 2-mg and 4-mg lozenges or 1.5-mg and 4-mg mini-lozenges, with a recommended maximum dose of no more than 15 lozenges per day.¹¹ In this setting, low-dose NRT could provide a simple, over-the-counter, low-cost treatment alternative that both patients and physicians should consider.

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Dear Editor,

Allergic contact dermatitis caused by sodium metabisulphite in a cosmetic bleaching cream

Sulphites, including sodium metabisulphite ($\text{Na}_2\text{S}_2\text{O}_5$) (SMB), are ubiquitous compounds with a variety of commercial uses in food and industry and also with medical and cosmetic uses. Their presence in food is regulated and labelled under E-numbers (SMB: E223). Although they are generally considered safe, adverse reactions to sulphites have been reported.¹

A 34-year-old female teacher presented with melasma patches on the face, after she had used a bleaching cream (Pigmentasa; Zeler, Portugal) containing hydroquinone 4% as the active component. About 48 h after its first application she noticed an acute facial eczema (Fig. 1a). The symptoms resolved after the withdrawal of the suspected

Conflict of interest: none

Abbreviation:

SMB

sodium metabisulphite



Figure 1 (a) Acute facial eczema 48 h after the first application of Pigmentasa cream. (b) Positive reaction to Pigmentasa cream and to sodium metabisulphite at 96 h. (c) Positive repeated open application test with Pigmentasa cream in the first week of application.

offending agent and the administration of a topical corticosteroid. The patient had not previously used other bleaching cosmetics.

Patch testing was performed with Finn Chambers (Epitest, Tuusula, Finland) (according to the International Contact Dermatitis Research Group criteria) with the Portuguese baseline series, and photopatch tests were made in duplicate, as well as with the patient's own product and its components (hydroquinone 1% petrolatum, cetylstearyl alcohol 20% petrolatum, propylene glycol 5% petrolatum, SMB 1% petrolatum, isopropyl myristate 2% petrolatum). The patient reacted to Pigmentasa and to SMB, both in non-irradiated and irradiated areas, with identical intensity (++) at 48 and 96 h (Fig. 1b). The repeated open application test with Pigmentasa cream was positive in the first week of application (Fig. 1c). An allergic contact dermatitis to SMB and the bleaching cream was then considered.

A recent study showed that SMB exists as a soft nucleophile able to react with electrophiles in skin proteins.² A relevant contact allergy to SMB is not often encountered. Maden and colleagues⁵ patch tested 1728 consecutive patients for SMB. Positive reactions were found in only 71 of them, with an identifiable source in 33 (26 secondary from exposure to Trimovate (GlaxoSmithKline, Brentford, UK) and Timodine (Reckitt Benckiser, Slough, UK), and seven patients with occupational exposure). Our patient developed allergic contact dermatitis to SMB in a bleaching cream. SMB is used in very low concentration in Pigmentasa cream as an antioxidant to promote the stability of the hydroquinone composition. It is advisable to perform patch test for all the ingredients if contact dermatitis occurs after using a hydroquinone cream because allergic contact dermatitis caused by hydroquinone contained in therapeutic creams is rare.⁴

In our patient, previous sensitisation to SMB was favoured by the short time between the first use of the aforementioned bleaching cream and facial eczema, and also the positive patch reaction to this allergen. Sources of exposure may be difficult to find because sulphites are ubiquitous agents.⁵ We stress the current relevance and rarity of this cosmetic reaction. To date, less than five cases of allergic contact dermatitis caused by SMB in bleaching creams have been reported. In our patient it is advisable to consider SMB avoidance in potential future exposures with a variety of topical and non-topical drugs.

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