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## Allergic contact dermatitis caused by *Salvia officinalis* extract

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**Key words:** contact; dermatitis; *Salvia officinalis*.

*Salvia officinalis* (sage) belongs to the Lamiaceae (Labiatae) family. Sage is a native of the Mediterranean region, although it has become naturalized in many places throughout the world, and is widely cultivated for medicinal and culinary use. The curative properties of sage are well recognized, and fresh leaves have been used to relieve bumps, sores, wounds, cuts, and other skin injuries. Despite its widespread use, allergic reactions to sage have rarely been reported. Here, we document a patient who developed contact dermatitis to sage after applying a lip balm to relieve dry lips.

### Case Report

An 83-year-old woman presented with a 3-month history of swelling and redness of the lips and surrounding area, followed by tightness and a burning sensation in the involved area. Previously, she had started applying a natural lip balm to prevent her lips from drying and cracking. An allergic reaction to the lip balm was then suspected.

She was patch tested with the European baseline, cosmetic and bakery series, and with her own commercially purchased lip balm. The allergen series and IQ Ultra® Chambers were provided by Chemotechnique Diagnostics (Vellinge, Sweden). Patch testing and interpretation were performed according to the International Contact Dermatitis Research Group standards. At D2 and D4, a positive reaction was noted only to the lip balm. Further patch testing with the two ingredients of the lip balm provided by the manufacturer, *Salvia* extract (*S. officinalis*) and polygonum (as is in water and pet.), gave positive reactions only to *Salvia* extract, both in water and in pet



Fig. 1. Patch test results on D4.

(Fig. 1). The patch test with the lip balm and with its two ingredients was negative in 20 healthy controls.

### Discussion

*S. officinalis* is an essential oil-containing plant that has been cultivated for centuries for culinary and healing purposes. The essential oils are the strongest active constituents, and are included in a variety of pharmaceutical, cosmetic and hygienic formulations (1, 2). Both irritant and allergic reactions to plants belonging to the Lamiaceae (Labiatae) family have been previously reported (3–9). Furthermore, cross-reactivity in immediate (10) and delayed (11) reactions has been noted between different plants in the family. However, most of the reports include other species in this large family. There is only one previous report of allergic contact dermatitis caused by *S. officinalis*, confirmed by a positive patch test reaction in a mushroom gatherer; alantolactone was found to be the causative constituent (12).

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This is the first reported case of contact allergy to *Salvia* extract from cosmetics. Furthermore, this case highlights the importance of obtaining individual ingredients from

the product manufacturer, especially when cosmetics are involved, in order to identify additional relevant allergens.

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