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Allergic contact dermatitis caused by resveratrol in a cosmetic cream

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Allergic contact dermatitis due to cosmetic products is frequent. Fragrances and preservatives are the most common allergens, but every component can be responsible for contact dermatitis.¹

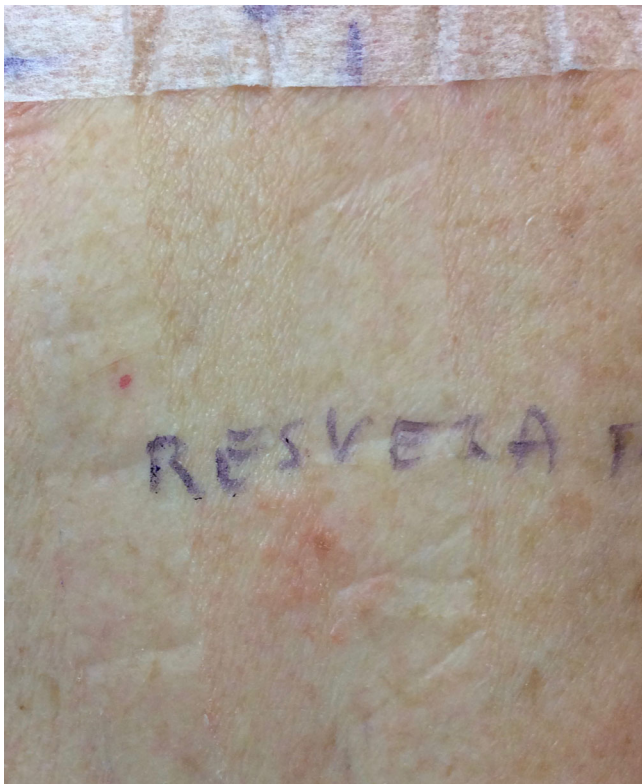


FIGURE 1 Readings on day 4 for resveratrol 10% paraffin (++)

CASE REPORT

A 69-year-old woman presented with a 7-month history of recurrent face and neck dermatitis, accentuated in the folds, sometimes accompanied by itchy erythema on the arms. She had no previous history of eczema or atopic dermatitis. Patch testing was performed with the European baseline series (Chemotechnique Diagnostics, Vellinge, Sweden), a cosmetic series with preservatives and fragrances (allergEAZE; SmartPractice, Phoenix, Arizona), and patient's own products. Readings were performed on day (D) 2 and D4, according to ESCD criteria. Readings were positive only to one cosmetic cream, Liftiane serum (SVR; Laboratoire SVR France, France, ++/++). A few months later, patch testing was performed with the ingredients of this product, kindly provided by the manufacturer and already diluted for patch testing. Readings showed a positive reaction to resveratrol 10% paraffin (-/++; Figure 1). Her dermatitis disappeared within 1 week after stopping the use of this cream. The diagnosis of allergic contact dermatitis caused by resveratrol was established. The same sample of resveratrol was used for patch testing in three other patients and readings showed no reaction.

DISCUSSION

Resveratrol (CAS no. 501-36-0) is a natural polyphenol found in different fruits and plant sources, especially in grapes, nuts, berries, and red wine. It is known for its antioxidative and anti-inflammatory properties. Besides being a reactive oxygen species scavenger, resveratrol participates in cellular protection systems in oxidative or inflammatory conditions by triggering specific signaling pathways and gene expression. Therefore, systemic supplementation of resveratrol is considered a promising adjuvant treatment for diseases such as cardiovascular disorders, cancer, and autoimmune diseases.²⁻⁴ Topical use of

resveratrol seems promising for the prevention or the treatment of skin disorders associated with oxidative stress such as skin cancer. In cosmetic creams, resveratrol is used as a brightening and “anti aging” agent.⁴ Two cases of contact sensitization to another allergen accompanied by a doubtful reaction to resveratrol have been reported in the literature.^{5,6} To our knowledge, this is the first case report of allergic contact dermatitis caused by resveratrol.

In conclusion, patch testing with patient's own cosmetic products is crucial to identify new or unusual allergens. If a positive reaction is observed, patch testing with the ingredients of the product must be performed and the manufacturers' help is therefore important.

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CONFLICT OF INTEREST

The authors have no conflict of interest to declare.

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