

been reported in only a few studies of adverse reactions from tattooing (with positive results)^{5,6} and can produce long-term cutaneous reactions. Due to the poor results obtained in allergy tests, some authors suggest that the allergen is not present directly in the tattoo ink, but it is produced by a slow haptenization, involving a photochemical cleavage of red azo pigments.⁴

As most reactions are associated with red colours, almost all the authors of this work suggest that, if the patient still insists on tattooing himself or herself, they should use 'red-free' tattoos avoiding red and garnet. For these, the emblems of soccer teams such as Real Madrid, Espanyol or Juventus could be recommended. We believe that this choice could be associated with a greater feeling of well-being and optimism. To date, we found no reports of adverse reactions to tattoos implicating these soccer teams, while at least another fan of 'Barça' was affected by a tattoo reaction,⁴ suggesting that this can be a high-risk choice. The authors would also like to propose *Culé Dermatitis* as a new name for this type of reaction, as 'culé' is the colloquial name for FC Barcelona fans in Spain.

Physicians should warn patients about the potential adverse effects of tattooing, and if a soccer fan has already made his or her decision, it would be wise to suggest the right soccer team to avoid these reactions.

All the authors are soccer fans, Dr. Morgado is a fan of Juventus FC; Drs. Podlipnik and Requena of Real Madrid CF; Dr. Aguilera of FC Barcelona; and Dr. Mascaró Jr. of RCD Espanyol.

D. Morgado-Carrasco,¹ S. Podlipnik,¹ P. Aguilera,¹
L. Requena,² J.M. Mascaró Jr.^{1,*}

¹Department of Dermatology, Hospital Clínic de Barcelona, Universitat de Barcelona, Villarroel 170, 08036, Barcelona, Spain, ²Department of Dermatology, Fundación Jiménez Díaz, Avda. Reyes Católicos 2, 28040, Madrid, Spain

*Correspondence: J.M. Mascaró Jr. E-mail: jmmascaro_galy@ub.edu

References

- Høgsberg T, Thomsen BM, Serup J. Histopathology and immune histochemistry of red tattoo reactions. *Skin Res Technol* 2015; **21**: 449–458.
- Gaudron S, Ferrier-Le Bouëdec M-C, Franck F, D'Incan M. Azo pigments and quinacridones induce delayed hypersensitivity in red tattoos. *Contact Dermatitis* 2015; **72**: 97–105.
- Forbat E, Al-Niaimi F. Patterns of reactions to red pigment tattoo and treatment methods. *Dermatol Ther* 2016; **6**: 13–23.
- Serup J, Hutton CK. Patch test study of 90 patients with tattoo reactions: negative outcome of allergy patch test to baseline batteries and culprits suggests allergen(s) are generated in the skin through haptenization. *Contact Dermatitis* 2014; **71**: 255–263.
- Gutermuth J, Hein R, Fend F, Ring J, Jakob T. Cutaneous pseudolymphoma arising after tattoo placement. *J Eur Acad Dermatol Venereol* 2007; **21**: 566–567.
- McFadden N, Lyberg T, Hensten-Pettersen A. Aluminum-induced granulomas in a tattoo. *J Am Acad Dermatol* 1989; **20**: 903–908.

DOI: 10.1111/jdv.15027

Allergic contact dermatitis caused by laurel fruit oil

Editor

Sweet bay or *Laurus nobilis* is a typical plant in Mediterranean region and is used as an ornamental or herbal plant. Laurel leaf and fruit oil are widely used in cosmetic products and in folk medicine because of its anti-inflammatory, analgesic, antioxidant and antibacterial features.^{1,2} Over 20 constituents such as sesquiterpene lactones (SLs), linalool, terpineol, eugenol and others are found in laurel fruit oil.^{3,4} The positive patch test result to SLs can be a possible marker to fragrance allergy.⁵

A 26-year-old female presented to our clinic with one-week history of severe skin itch and rash, which started on her neck and chest area. The patient had a viral upper respiratory tract infection and applied laurel fruit oil on her neck and chest for cough relief. The patient has been using laurel fruit oil for treatment of different conditions. After a few days of applying laurel fruit oil, she developed skin rash and severe itch (Fig. 1). Allergic contact dermatitis was suspected and treatment with short course of oral 40 mg prednisolone, antihistamines (*tab. Cetirizinum* 10 mg daily) and emollients was initiated. The symptoms fully resolved after three days after the therapy start.

Six weeks later, the cutaneous patch testing was performed with the European Baseline Series (Chemotechnique®, Vellinge, Sweden) and patient's own laurel fruit oil 'as is'. The patient had positive reactions at day (D) 2 and D3 to SL mix 0,1% pet. (Chemotechnique®, Sweden) (+++) and laurel fruit oil 'as is' (+++) (Fig. 2).

Positive cutaneous patch test reactions confirmed the diagnosis of allergic contact dermatitis, caused by the laurel fruit oil, and it was recommended to avoid cosmetic products and plants containing SLs.



Figure 1 Erythematous papules and plaques on the chest and neck area.

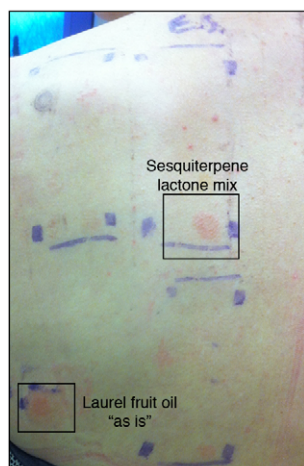


Figure 2 Positive reactions to sesquiterpene lactone mix and laurel fruit oil 'as is' after 48 h.

We present a rare case of allergic contact dermatitis to laurel fruit oil. The contact dermatitis to laurel fruit or leaf oil is rather uncommon and usually affects aromatherapists or folk medicine users.^{1,6} The Information Network of Departments of Dermatology (IVDK) data showed that around 1% of patch-tested dermatitis patients had positive reaction to laurel leaf extract.⁷

Laurel fruit oil contains sterols, waxes, unsaturated fatty acids, SLs and other substances.⁴ SLs comprise a large group of secondary plant metabolites found in *Compositae*, *Solanaceae*, *Araaceae*, *Euphorbiaceae* and other families of plants. SLs are known to have antimalarial, anti-inflammatory, antitumour, antimigraine, analgesic properties and are used for treating diarrhoea, flu and burns in folk medicine.² However, SLs containing plants can induce allergic reactions. SLs can directly induce degranulation of mast cells and act as haptens, leading to sensitisation and a delayed type hypersensitivity reaction.^{2,8} Systemic allergic dermatitis induced by SLs containing plants (particularly by strong contact allergens such as costunolide in bay leaves) has been reported.⁹ Ingestion of SLs containing plants or inhalation of SLs can cause generalised exanthema or other systemic reactions.⁹ Other *Compositae* species suspected to cause systemic reactions are artichoke, chicory, mugwort and herbal tea (chamomile, dandelion and milfoil).⁹ Also, there are data about possible SLs cross-reactions with fragrances and especially colophonium.⁵

We advised our patient to avoid contact with *Compositae* family plants and be cautious with food containing SLs. Our case demonstrates the usefulness of patch testing with patient's own products in addition to standard patch test series as it helps not only to detect the source of the culprit allergen but also to show the clinical relevance of the positive reactions to the allergens in the standard series.

D. Staseviciene,^{1,*} A. Chomiciene,² L. Malinauskiene,² J. Grigaitiene¹

¹Centre of Dermatovenereology, Clinic of Infectious Diseases and Dermatovenereology, Faculty of Medicine, Vilnius University, Kairiukscio g. 2, LT-08411, Vilnius, Lithuania, ²Centre of Pulmonology and Allergology, Clinic of Infectious Diseases and Dermatovenereology, Faculty of Medicine, Vilnius University, Santariskiu g. 2, LT-08410, Vilnius, Lithuania

*Correspondence: D. Staseviciene. E-mail: dominyka.staseviciene@gmail.com

References

- Brás S, Mendes-Bastos P, Amaro C, Cardoso J. Allergic contact dermatitis caused by laurel leaf oil. *Contact Dermatitis* 2015; **72**: 417–419.
- Chadwick M, Trewin H, Gawthrop F, Wagstaff C. Sesquiterpenoids lactones: benefits to plants and people. *Int J Mol Sci* 2013; **14**: 12780–12805.
- Sangun MK, Aydin E, Timur M, Karadeniz H, Caliskan M, Ozkan A. Comparison of chemical composition of the essential oil of *Laurus nobilis* L. leaves and fruits from different regions of Hatay, Turkey. *J Environ Biol* 2007; **28**: 731–733.
- Castilho PC, Costa M, Rodrigues A, Partidario A. Characterization of laurel fruit oil from Madeira Island, Portugal. *J Am Oil Chem Soc* 2005; **82**: 863–868.
- Paulsen E, Andersen KE. Colophonium and compositae mix as markers of fragrance allergy: cross-reactivity between fragrance terpenes, colophonium and compositae plant extracts. *Contact Dermatitis* 2005; **53**: 285–291.
- Adißen E, Önder M. Allergic contact dermatitis from *Laurus nobilis* oil induced by massage. *Contact Dermatitis* 2007; **56**: 360–361.
- Uter W, Schmidt E, Geier J, Lessmann H, Schnuch A, Frosch P. Contact allergy to essential oils: current patch test results (2000–2008) from the Information Network of Departments of Dermatology (IVDK). *Contact Dermatitis* 2010; **63**: 277–283.
- Amorim MH, Gil da Costa RM, Lopes C, Bastos MM. Sesquiterpene lactones: adverse health effects and toxicity mechanisms. *Crit Rev Toxicol* 2013; **43**: 559–579.
- Paulsen E. Systemic allergic dermatitis caused by sesquiterpene lactones. *Contact Dermatitis* 2017; **76**: 1–10.

DOI: 10.1111/jdv.15031

Pseudo-Kaposi sarcoma: report of a case investigated by dermoscopy, reflectance confocal microscopy and optical coherence tomography

Editor

First described in 1965 by Mali *et al.*, pseudo-Kaposi sarcoma (PKS), also known as acroangiadermatitis, is a rare disease inscribed in the setting of cutaneous reactive angiomatoses (CRAs).^{1,2} CRA is all characterized by occlusion and/or inflammation of cutaneous vessels, followed by histiocyte recruitment and endotheliocyte and pericyte hyperplasia.³ As the name