



DISCUSSION

The genus *Euphorbia* is known as one of the largest genera of flowering plants, with almost 2000 species. It is traditionally used to treat skin cancers, actinic keratosis, and digestive system disorders.² Many species of *Euphorbia* typically have a milky sap that can cause irritant reactions, including *E. helioscopia*, *E. pulcherrima*, *E. marginata*, *E. myrsinites*, and *E. hermentiana*.^{3–7} *E. trigona*, known as African milk tree, also produces a milky sap which causes irritant contact dermatitis. Darlenski et al reported a case of dermatitis caused by *Euphorbia trigona* that developed after cleaning the plant and accidental contact with some drops of the sap released when cutting its leaves.¹ In the present case, the patient had used the plant as a “traditional medicine” that is believed to treat acne. *E. trigona* sap has also been reported to cause keratouveitis after application into eyes to relieve itching.⁸ It is strongly recommended that skin and eyes be sufficiently protected when handling *Euphorbia* plants.

CONFLICTS OF INTERESTS

The authors declare no conflicts of interest.

ORCID

Ömer Faruk Elmas <https://orcid.org/0000-0002-5474-6508>

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An unusual clinical presentation of allergic contact dermatitis to common ivy

Nadia Raison-Peyron | Jean-Luc Bourrain | Céline Girard | Candice Rancé | Olivier Dereure

Department of Dermatology, CHU Montpellier, University of Montpellier I, Montpellier, France

Correspondence

Nadia Raison-Peyron, Service de Dermatologie, CHU Montpellier, Université Montpellier I, FR-34295 Montpellier cedex 5, France.

Email: n-raison@chu-montpellier.fr

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CASE REPORTS

Case 1

A 50-year-old male with no significant medical history apart from contact cheilitis from scented lip balm was referred for investigation of an acute and widespread rash. Two days after outdoor gardening in mid-April in shorts and a T-shirt, he developed an extensive very itchy vesiculo-bullous rash on an infiltrated base affecting arms (mainly

wrists), and legs, with some lesions resembling erythema multiforme (Figure 1). No mucosal lesions, fever, or lymphadenopathies were observed. Further history revealed that he had been in contact with common ivy, bamboo, and Virginia jasmine during gardening.

Standard blood tests displayed only a mild eosinophilia at 0.800 G/L with no inflammatory syndrome. Lesional skin biopsy showed typical signs of acute eczema and negative immunofluorescence detection (IFD). Topical steroids rapidly supplemented with oral prednisone 1 mg/kg/day led to fast improvement within a few days



FIGURE 1 Oozing vesicles and crusting lesions surrounded by erythema multiforme-like lesions

and the lesions completely vanished in 2 weeks. Allergological investigations were performed after this acute episode with the European baseline series and a plants and a fragrances series (Chemotechnique Diagnostics, Vellinge, Sweden). The different plants the patient had been in contact with during gardening were also tested "as is". Patch tests were performed on the upper back using IQ-Ultra Chambers (Chemotechnique Diagnostics) under occlusion for 2 days with Oper tape (Iberhospitex Innovative Health Technologies, Barcelona, Spain). A doubtful result at day (D) 2 and a weak positive result at D4 to *Myroxylon pereirae* was obtained and + at D2 and D4 for fragrance mix I (probable past relevance, related to contact cheilitis). Patch tests with plants and fragrance series were negative, while of the three plants handled during gardening, the only positive (+ at D2 and ++ at D4) were common ivy stalk and the related leaf, ++ at D2 and +++ at D4. However, the patch test with the leaf was sharply demarcated in one corner, suggesting a mixture of allergy and irritancy (Figure 2). The patient told us he had skin contact with common ivy over 20 years ago without any problem.

Case 2

A 42-year-old female with no significant medical history was referred for an acute rash on her legs and arms. In June, she had removed plants (including common ivy) to dry them and subsequently moved



FIGURE 2 Positive patch tests to leaf of common ivy +++ at day 4

the piles of herbs, and again pulled out common ivy from a stone wall while wearing shorts, T-shirt, and sneakers 1 month and 1 week before rash occurrence, respectively. She did not remember being in contact with common ivy in the past. The very itchy vesiculo-bullous inflammatory rash was localized on her arms and legs. Some of the lesions had an erythema multiforme-like aspect (Figure 3[A, B], close-up of lesions in Online supplemental Figure S1). Herpes zoster was initially suspected, and she received valaciclovir and a topical treatment with an antiseptic solution (Biseptine; Bayer Schering Pharma, Leverkusen, Germany). However, the rash rapidly worsened and extended to the face, neckline, hands, and feet, despite a shift to potent topical steroids. No mucosal lesion nor lymph node enlargement was present. Blood tests showed a mild inflammatory syndrome (C-reactive protein 16.4 mg/L) and a slight increase of white blood cell count at 11.48 G/L with 7.77 G/L of neutrophils. Skin biopsy was consistent with a vesiculous and bullous eczema with discrete interface dermatitis. Immunofluorescence detection was negative. Oral prednisone 1 mg/kg/day resulted in fast improvement.

Patch tests using the European baseline series with additions, including benzyl alcohol, benzalkonium chloride, and chlorhexidine digluconate, present in Biseptine, a plant series (Chemotechnique Diagnostics), common ivy (leaf and stalk), and Biseptine "as is" were performed. The tests were positive for methylisothiazolinone 0.2% (++) at D2 and D4), octylisothiazolinone 0.1% (+ at D4) and common ivy, stalk, and leaf (++) at D2 and D4), with sharply demarcated edges. No past or present relevance was found for the isothiazolinones.

DISCUSSION

Allergic contact dermatitis to common ivy (*Hedera helix* L. Spp *helix*) is well known, even though irritant contact dermatitis is more frequent.^{1,2} In our two cases, the pattern of the patch tests was suggestive of a mixture of allergy and irritancy. In the second case, a phytophototoxic reaction caused by another unknown plant could not be excluded, but the generalized eruption, the erythema multiforme aspect of the secondary lesions at distance from the initial contact, and the long delay between



FIGURE 3 (A), Acute erythematous and vesiculobullous eruption of both legs. (B), Target-like lesions of trunk and upper extremities

exposure and the beginning of the eruption, supported an allergic mechanism. The main allergens of common ivy are falcarinol and didehydrofalcarinol, which are not commercially available as plant allergens to be tested.¹ Falcarinol can also be present in other plants of the Araliaceae family, such as the ornamental plant Schefflera and ginseng, as well as in plants from the Apiaceae family (eg., carrots, parsnips, celery, caraway, and dill).¹ Airborne contact dermatitis and contact urticaria to common ivy have also been reported, although less frequently.^{3,4} Erythema multiforme-like acute eczema as displayed by our patients is a rare clinical variant of allergic contact dermatitis. This peculiar clinical presentation is most often described with strong allergens and the initial dermatitis may resemble an usual eczematous morphologic pattern followed by distant lesions on skin without contact showing erythema multiforme-like appearance.⁵ Such an atypical clinical pattern has been previously reported with some plants, including primrose, exotic woods, poison ivy, and more recently, *Geranium robertianum*, but not with common ivy, to the best of our knowledge.^{5–10} As suggested by some authors, it would be relevant to include falcarinol in the plant series testing owing to the relatively high frequency of common ivy-related allergic contact dermatitis in Europe.²

CONFLICTS OF INTEREST

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ORCID

Nadia Raison-Peyron  <https://orcid.org/0000-0002-7991-3165>

Jean-Luc Bourrain  <https://orcid.org/0000-0002-9501-9331>

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SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section at the end of this article.

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