

Incognito allergic contact dermatitis from common ivy (*Hedera helix* L) hiding behind Compositae sensitization

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CASE REPORT

An otherwise healthy 8-year-old boy, with atopic disposition from his father, was referred with a recurring painful blistering rash for 2 years, primarily located on his hands and fingers, and to a lesser degree on his feet and around his mouth. The blisters occurred especially in summer and fall, without any obvious triggering cause. Monstrous bullae were observed at his fingers and the dorsal aspects of his hands (Figure 1). Biopsy showed spongiosis compatible with an eczematous reaction. There was no scarring or hyperpigmentation.



FIGURE 1

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The bullous eruption at the dorsal aspects of the patient's hands and fingers

The boy liked to play in the garden and in a nearby forest all year round. Sometimes recurrence of blistering eruptions could be related to picking flowers, including tansy (*Tanacetum vulgare*) and dandelion (*Taraxacum officinale*).

When the boy was 9-years-old, patch testing was performed on the upper back with the European baseline series, adapted for children, with the addition of Compositae mix II 5% pet., the allergens in Compositae mix II 5%, dandelion 2,5% pet. (Chemotechnique, Vellinge Sweden), and the following allergens from own production/gifts: milfoil (yarrow) extract 1% pet., true chamomile 2,5% pet., stinking dog fennel extract 1% pet., tansy 1% pet., and florists' chrysanthemum extract 3,0% pet. The patch-test materials were applied to his back for 2 days, using Finn Chambers on Scanpor tape (SmartPractice, Phoenix, Arizona). Readings were performed on day (D) 3 or D4 and D7, according to the ESCD guidelines. Weak positive reactions (1+) were observed to the Compositae mix 5% pet., two tansy extracts 1% pet., and true chamomile 2,5% pet., and there was a doubtful reaction to dandelion. It was concluded that the blistering reactions were caused by Compositae sensitization. However, because of continuous blistering (Figure 2) despite avoidance of Compositae plants, further testing was planned almost a year later. In both the garden and forest, there was a rich growth of common ivy (*Hedera helix* L), and on several occasions he held onto the ivy with his hands while climbing. Patch testing with falcarinol 0,03% pet. (own production), showed a positive reaction (1+ D3, 0 D7), confirming allergic contact dermatitis caused by common ivy. After removal and avoidance of ivy, there have been no further blistering reactions, other than a single episode after accidental ivy contact.



FIGURE 2

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The blistering eruption after skin contact with common ivy

DISCUSSION

Common ivy (*Hedera helix* L) is a well-known native and ornamental plant in Europe. Reports of contact dermatitis from ivy have regularly appeared since 1899, but only once in a child with concomitant Compositae sensitization.¹⁻³ Allergic contact dermatitis may be caused by the leaves and roots. Because of its antimicrobial properties, it is used in a variety of ointments, hair lotions, teas, and expectorants. It contains at least two allergenic polyacetylene compounds—falcarinol and didehydrofalcarinol—both powerful irritants and moderate sensitizers.⁴ Contact dermatitis from the plant may be underdiagnosed, partly due to lack of commercial patch-test allergens. In our case, the Compositae sensitization delayed the correct diagnosis.

CONFLICT OF INTEREST

None to declare.

AUTHOR CONTRIBUTIONS

Rasmus Overgaard Bach: Writing – original draft (equal). **Annette Schuster:** Writing – review and editing (equal). **Anette Bygum:** Writing – review and editing (equal). **Evy Paulsen:** Writing – review and editing (equal).

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