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Airborne contact dermatitis caused by common ivy (*Hedera helix* L. ssp. *helix*)

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Common ivy (*Hedera helix* L. ssp. *helix*) can cause both irritant and allergic contact dermatitis (1). Cases have been reported regularly since 1899, and since 1987 at least 28 cases of contact dermatitis caused by common ivy have been reported (2). We report a case of allergic contact dermatitis caused by common ivy as a result of airborne exposure.

Case Report

A 21-year-old male gardener was referred to us with a 4-day history of widespread dermatitis on his extremities and neck. He had no previous skin disease. He had worked as a landscape gardener for the previous 2 years, and had been pruning common ivy 2 days before the dermatitis outbreak. Examination showed severe dermatitis on the middle of his thighs down to his lower legs, partly involving the ankles, and on the middle of his upper arms and distally continuing to the hands. The pattern of dermatitis was consistent with plant dermatitis: multishaped vesiculo-bullous lesions on exposed skin (Fig. 1). He was treated with both systemic and topical corticosteroids for 3 weeks. Patch testing was performed with an extended European baseline series, fragrance substance series, and two leaves (a small leaf and a large leaf) of common ivy. Finn Chambers® (8 mm; SmartPractice, Phoenix, AZ, USA) on Scanpor® tape (Norgesplaster A/S, Vennesla, Norway) were used. The patch tests were applied to the

upper back and occluded for 48 hrs. Readings were performed on D2, D3, and D7, according to ICDRG recommendations (3). Positive test reactions to both common ivy leaves (2+ reactions) were observed (Fig. 2). The dermatitis was diagnosed as occupational allergic contact dermatitis caused by common ivy, and the patient received extensive information on protective measures and avoidance of the allergen.

At 1-year follow-up, the patient reported flare-ups of previous symptoms during summer. The first episode occurred after he had been standing near a coworker pruning common ivy. The other episode occurred after he had transported a load of pruned common ivy on a trailer. During both episodes, he experienced rhinitis and conjunctivitis, and felt malaise on the following days, with severe dermatitis on parts of his body not covered by clothes: the head, lower arms, and lower legs. This was treated with topical corticosteroids without prior medical consultation.

Discussion

Allergic contact reactions to common ivy are rarely seen in our clinic. It has been suggested that the low incidence observed could be the result of an underdiagnosed allergy, as commercially available test preparations are not available (4). On the basis of the patch test, the morphology of the dermatitis, and the patient's occupational history, he was initially diagnosed with occupational allergic contact dermatitis caused by common ivy. What makes this case worthy of attention is the subsequent airborne allergen exposure followed by allergic contact dermatitis on uncovered skin. To our knowledge, this is the first report of airborne elicitation of allergic contact dermatitis caused by common ivy. Thus, it is a ubiquitous allergen for those working as landscape gardeners.

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Fig. 1. The landscape gardener was wearing shorts and a T-shirt when pruning common ivy. (a, b) The patient's left lower arm. (c, d) The patient's left leg. Notice the multishaped vesiculo-bullous pattern of his lesions on unprotected skin.



Fig. 2. Test reaction to a large leaf of common ivy; D2 patch test reading; strong positive reaction (2+); erythema, infiltration, papules, and vesicles.

References

- 1 Hausen B M, Bröhan J, König W A, Faasch H, Hahn H, Bruhn G. Allergic and irritant contact dermatitis from faltarinol and didehydrofaltarinol in common ivy (*Hedera helix* L.). *Contact Dermatitis* 1987; **17**: 1–9.
- 2 Paulsen E, Christensen L P, Andersen K E. Dermatitis from common ivy (*Hedera helix* L. subsp. *helix*) in Europe: past, present, and future. *Contact Dermatitis* 2010; **62**: 201–209.
- 3 Wilkinson D S, Fregert S, Magnusson B et al. Terminology of contact dermatitis. *Acta Derm Venereol* 1970; **50**: 287–292.
- 4 Jones J M, White I R, White J M, McFadden J P. Allergic contact dermatitis to English ivy (*Hedera helix*) – a case series. *Contact Dermatitis* 2009; **60**: 179–180.