

CONTACT POINTS

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Compositae allergy in three children with hand dermatitis

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Compositae (Asteraceae) is the second largest plant family worldwide and a well-recognized cause of contact allergy, especially in gardeners, florists, and farmers (1). Sesquiterpene lactones in the sap of Compositae plants are the major sensitizing compounds. Typically, Compositae contact allergy affects middle-aged and elderly men and can lead to chronic actinic dermatitis (2). Seasonal exacerbation of symptoms may occur, and both airborne and localized distribution patterns, sometimes mimicking photodermatoses, have been described (3, 4). Compositae contact allergy has been rarely described in children, and the few existing case series have reported prevalences ranging between less than 1% and 4% (5–8). The discrepancy in contact allergy prevalence between study populations may, at least in part, be due to irritant reactions. Compositae mix 6% was used in the German case series with the highest reported prevalence, rather than 2% or 2.5%, as has been reported previously in the UK (7, 9). We present three cases of Compositae contact allergy to highlight the importance of patch testing to Compositae plants in children. The children were patch tested to both the British Contact Dermatitis Society baseline and a plant series, using Finn Chambers® on Scanpor® tape applied for 2 days. Patch test results were read on D2 and D4 using International Contact Dermatitis Research Group recommenda-

tions. All allergens were supplied by Crawford Health Care Ltd. (Milton Keynes, UK), except dipentene 2%, usnic acid 0.1%, and yarrow extract 1% (Trolab, Bio-Diagnostics, Upton upon Severn, UK).

Case 1

A 3-year-old boy presented with hand eczema. He had suffered with eczema since early infancy, initially confined to the face, but prior to presentation, his eczema had shifted to the hands (Figs. 1 and 2). There was no personal history of urticaria, hay fever, or asthma, but there was a family history of eczema. He lived on a dairy farm.

Patch testing to the British baseline and plant series gave positive reactions to Compositae mix 2.5% pet., sesquiterpene lactone mix 0.1% pet., as well as extracts of tansy 1% pet. (*Tanacetum vulgare*), arnica 0.5% pet. (*Arnica montana*), feverfew 1% pet. (*Tanacetum parthenium*), yarrow 1% pet. (*Achillea millefolium*), and dandelion 2.5% pet. (*Taraxacum officinale*) (Table 1).

Case 2

An 8-year-old boy, who enjoyed playing in the garden, presented with hand eczema. Initially, at onset aged 2, his eczema had been generalized but over



Fig. 1. Compositae-related hand dermatitis in a 3-year old boy.



Fig. 2. Compositae-related hand dermatitis in a 3-year old boy.

Table 1. Summary of patch test results

	Compositae mix 2.5%	Sesquiterpene lactone mix 0.1%	Tansy 1%	Arnica 0.5%	Feverfew 1%	Chamomile 2.5%	Yarrow 1%	Chrysanthemum 1%	Taraxacum 2.5%	Alantolactone 0.033%
Case 1	+++	+++	++	+	++	—	+	—	++	—
Case 2	++	++	++	++	++	+	++	+	++	+
Case 3	+	—	++	+	++	++	++	—	+	—

the years had become mostly confined to his hands. Exacerbations occurred in summer. There was a personal history of urticaria, but not of hay fever and asthma; there was a history of eczema in his siblings. Patch testing was positive to Compositae mix 2.5% pet., sesquiterpene lactone mix 0.1% pet., as well as extracts of tansy 1% pet., arnica 0.5% pet., feverfew 1% pet., chamomile 2.5% pet. (*Chamomilla recutita*), yarrow 1% pet., dandelion 2.5% pet., chrysanthemum 1% pet. (*Dendranthema cultivars*), and alantolactone 0.033% pet (Table 1).

Case 3

An 8-year-old girl presented with a five-year history of flexural and facial eczema. Her eczema became worse in summer, predominantly in sun-exposed areas. She lived in the countryside on the edge of fields. There was a history of hay fever and asthma and a family history of eczema. Patch testing was positive to Compositae mix 2.5% pet., as well as the extracts of tansy 1% pet., arnica 0.5% pet., feverfew 1% pet., chamomile 2.5% pet., yarrow 1% pet., and dandelion 2.5% pet (Table 1). The sesquiterpene lactone mix 0.1% pet. and photo patch tests were negative.

These three cases demonstrate that patch testing in children to the plant series is important, especially where eczema is confined to the hands or where airborne allergen exposure is suspected. All three children were in regular contact with Compositae plants when playing outside. The patch test results were, therefore, very likely to be of current relevance, although pre-existing atopy in two of the cases may well have been a contributory factor. We have previously shown that Compositae mix is more sensitive than sesquiterpene lactone mix in the detection of Compositae contact allergy (10). Consequently, both allergens have been included in the British baseline series, but the European baseline series still only contains sesquiterpene lactone mix.

Excluding Compositae mix in our cases would have resulted in us missing Compositae contact allergy in the third case. Therefore, we suggest that if the European baseline series or other standardized patch test series are used in children, the Compositae mix should be added (11–14). The importance of Compositae contact allergy has recently been highlighted by the inclusion of Compositae mix 6% in the paediatric patch test series recommended by the German Contact Dermatitis Research Group (15). However, our own data in adults suggest that Compositae mix as low as 1% has adequate sensitivity and may avoid the potential risk of irritant reactions with higher concentrations and active sensitization (16). Studies are needed to compare the validity of Compositae mix concentrations, using different concentrations and allergens from different sources, to optimize test solution concentrations and to enable comparability between study populations.

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