

choice of the right allergens to be used in patch tests.

We report an intriguing case of allergic contact dermatitis because of *Cineraria* hybrid flower, belonging to the Compositae family.

Case Report

A 58-year-old housewife presented with an eczematous–oedematous dermatitis involving the hands and the distal part of forearms, contracted 2–3 months previously.

Detailed questioning showed a passion for gardening and in particular for a small flowering plant, a florist's *Cineraria* hybrid, belonging to the genus *Senecio* of the Asteraceae family, given to her a few months earlier. Patch tests with the Italian standard SIDAPA series and with the allergen Compositae mix were all negative.

We therefore performed patch tests with the leaf of the plant (negative) and with the flower, as is, which showed an allergic reaction (++D2/++D3) (Fig. 1). Patch testing with flowers in 6 controls was negative.

The patient refused further tests with plant extracts. Interestingly, the eczematous reaction in the site of patch test with the flower was still persistent after 20 days. An allergic contact dermatitis of the hands to *Cineraria* hybrid was therefore diagnosed.

Discussion

Cineraria belongs to the Compositae family also known as Asteraceae. Compositae is one of the largest plant families, approximately 25 000 species, and represents about 10% of the world's flowering plants (1). The Tribe *Senecioneae* lists 100 genera close to 3000 spp. distributed all over the world (2). *Cineraria* hybrids are very common flowering plants sold by florists.

The classical form of the Compositae dermatitis, especially described in hot and arid climates, is characterized by a chronic, red, thickened eruption of exposed skin, which resembles a photodermatitis with acute flare-ups during the growing season (1, 3). In our case, the localized pattern, a chronic eczematous dermatitis in the sites of contact with allergen, was observed (3).

Allergic contact dermatitis because of *Cineraria* hybrid in a keen gardener housewife

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Allergic contact dermatitis from Compositae plants is a common and well-known allergological problem (1). However, the clinical diagnosis may be challenging as well as the



Fig. 1. Positive reaction to the flower of *Cineraria* hybrid.

The main allergens in Compositae family are sesquiterpene lactones (SL), 15-carbon atom molecules in which a methylene group is attached to a lactone ring (4). Routine screening with both SL mix and Compositae mix detects 90% of Compositae allergies with a prevalence, respectively, of 0.9–1.8% and 3.1% (5, 6).

Compositae mix has been recognized as a more sensitive test for Compositae dermatitis than the SL mix (7).

Reports from the literature (6) have underlined that it may be useful to test Compositae plant extracts, as these may contain additional allergenic constituents (polyacetylenes, thiophenes) in comparison with a mixture of pure SL (8). The plant sensitizers can be extracted in various solvents such as acetone, alcohol, ether, acid, alkali, water, etc. and then used for patch testing (9). The solubility of these sensitizers may vary in different solvents producing variable concentrations, which, in turn, may affect patch test positivity (9, 10).

In clinical practice, besides the SL mix, Compositae mix, plant extracts, and parts of suspected plants (leaves, stems, and flowers) may be used although the tests with plants, as is, can give false-positive reactions (because of irritant reactions) or false-negative reactions (because of low allergen concentrations). Most SL allergens are present in the oleo-resin fraction of some pollens, leaves, stems, and flowers. The trichomes, fragile hairlike appendages, contain the highest concentration of SL allergens; the greatest quantity of allergens

is found in leaf undersurface trichomes as well as in flowering heads (1, 3, 5).

In our patient, only the allergen Compositae mix was tested and resulted negative; on the other hand, the test with flower, as is, was positive perhaps because of higher concentration of the responsible allergen in the flowers than in the leaves.

Senecio cruentus has been reported as a cause of occupational mucosal symptoms and irritant dermatitis (11). No further cases of allergic contact dermatitis to *Cineraria* hybrid have been found in current literature. This case confirms that *Cineraria* hybrid is another culprit in the broad field of allergic contact dermatitis because of Compositae plants.

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