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Allergic contact dermatitis to cotoneaster species

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Cotoneaster-induced dermatitis has been recognized for over 100 years (1), but there have been only a few cases reported in the literature. Cotoneaster is a common garden shrub, with ~ 300 different species worldwide. We report a case of allergic contact dermatitis to cotoneaster confirmed by patch testing.

Case Report

A 41-year-old policewoman with manageable atopic eczema was referred to our contact dermatitis clinic. Five months previously, she had suffered an acute severe flare of facial eczema requiring treatment with oral steroids. The reaction began with intense facial and periorbital pruritus half an hour after she had pruned cotoneaster and ivy in her garden. Within 72 hr, she experienced an eczematous rash on the face and eyelids, associated with swelling. This was followed by a generalized dermatitis. There were no systemic symptoms. On examination, eczematous lesions were noted on the upper eyelids, cheeks, chin, and perioral area. The rest of the body was clear.

Following negative results with open patch testing and prick testing with cotoneaster bark and leaf and ivy leaf, the patient was patch tested with these substances. Patch testing was carried out with the British Society of Cutaneous Allergy baseline series, our departmental plant series, and crushed fresh cotoneaster bark and leaf and ivy leaf from the patient's garden. Allergens were applied in Finn Chambers® under Scanpor® tape, and readings were performed at D2 and D4 hr, according to the methodology of International Contact Dermatitis Research Group. Bark and leaves of cotoneaster were sent for species identification, and showed the species to



Fig. 1. Patch testing with crushed fresh cotoneaster leaf and ivy leaf showed + reactions at 48 hr.

be *Cotoneaster simonsii* (Fig 2). Figure 1 shows + reactions to cotoneaster leaf and ivy leaf at 48 hr. Other patch testing results were negative. Four weeks later, the patient developed late + reactions to methylchloroisothiazolinone/methylisothiazolinone; 100 ppm and fragrance mix 1, which were also of current relevance. After avoidance of contact with cotoneaster, ivy, and products containing methylchloroisothiazolinone and



Fig. 2. *Cotoneaster simonsii*, the plant from the patient's garden.

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methylisothiazolinone and fragrance, her facial eczema improved significantly without the need for systemic steroids or large amounts of topical steroids.

Discussion

Unlike allergic contact dermatitis caused by ivy, preservatives, and fragrance, which is well recognized, only a few case reports of cutaneous reactions to different *Cotoneaster* species (*Cotoneaster microphyllia* (1), *Cotoneaster lacteus* (2), and *Cotoneaster horizontalis* (3)) have been cited, either as contact urticaria (2, 4) or as allergic contact dermatitis (3). Similar cutaneous reactions were reproducible in previous cases only with the use of fresh samples of different parts of cotoneaster plants, and not extracts.

One report suggested that a lipid transfer protein from the plant could be responsible for the cutaneous eruptions (2).

In this case, contact allergic dermatitis caused by cotoneaster was at least contributory to a severe eczematous rash. Contact allergic dermatitis caused by cotoneaster may well be under-recognized, and should be considered particularly in gardeners with unexplained dermatitis.

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