

kDa one. Preincubation of the serum with banana and kiwi extracts caused a little reduction of the IgE binding to the 46-kDa protein and a strong reduction to the 20-kDa allergen. No inhibition was obtained with other fruit extracts.

This case shows a striking correlation between latex sensitization and subsequent development of food allergy. The patient had no previous personal history of allergy, and when she first manifested symptoms of latex hypersensitivity, her total IgE, skin tests, and RAST to inhalant and food extracts were normal. RAST to latex was negative at the beginning, possibly due to the known lower sensitivity of this method as compared to prick-testing. Latex allergy induced sensitization not only to common cross-reacting fruits but also to sweet pepper. Although cross-reactivity between latex and sweet pepper has already been described (1, 2), there was no evidence up to now of the identity of the cross-reacting allergens. Our study suggests that prohevein or its homologous protein present in sweet pepper, as well as in some fruit or nut extracts (chestnut, banana, peach, and kiwi), could be the main allergen involved. In addition, a second component identifiable as a homolog of patatin seems to be important in the cross-reactivity between latex and chestnut.

Key words: cross-sensitivity; fruit; latex allergy; patatin; prohevein; sweet pepper.

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Occupational allergy to the umbrella tree (*Schefflera*)

GARDENERS, florists, floriculturists, and greenhouse workers have an increased risk of developing occupational allergies to decorative plants (1). The most common allergy, suffered also by normal, nonatopic people, is that to weeping fig (*Ficus benjamina*) (2). In recent years, there have been an increasing number of reports of allergies to other indoor plants, such as spathe flower (*Spathiphyllum floribundum*, *S. wallisii*) (3, 4), *Tradescantia* (*Albifloxia*) (5), and Christmas cactus (*Schlumbergera*) (6). In this paper, we describe an occupational respiratory allergy to the umbrella

Allergy to

nonpollinating, indoor,

green plants is

becoming common.

tree (*Schefflera*), a relatively common ornamental green plant. Falcarinol, a component of *Schefflera*, can elicit allergic contact dermatitis in man (7), and there has been

one case of toxicosis in a dog which was attributed to another component of *Schefflera*, oxalate (8).

■ The patient was a qualified landscape gardener. When she started new employment as an indoor gardener (plant care in a shopping center), she noticed, after 1 month, itchy eyes, sneezing, and wheezing. These symptoms were all clearly linked to her employment. The severity of the symptoms increased regularly from Monday to Friday; at the weekends, they ceased. The symptoms started already early in the morning, especially within 5-10 min after contact with either *F. benjamina* or *Schefflera*. Two years before, she had suffered from one seasonal episode of minor rhinoconjunctivitis; otherwise she had no history of atopy.

■ Skin prick tests (SPT) were performed with commercial extracts (ALK, Hørsholm, Denmark) in glycerol for routine inhalants on the volar side of the forearm. *F. benjamina* leaves and wood extracts were purchased from Allergopharma, Reinbeck/Hamburg, Germany. SPTs with native plant leaves were performed by the prick-prick technique. Serum IgE was measured by CAP FEIA technology (Pharmacia & Upjohn, Uppsala, Sweden). The CAP to *Schefflera* leaves was kindly performed by Prof. S. G. O. Johansson, Institute of Clinical Immunology, Karolinska Hospital, Stockholm, Sweden, with extracts from plant samples.

SPTs were positive for alder (+), ash (++), birch (++), hazel (+), grass (+++), and rye pollen (++) as well as *Alternaria* (+), *Aspergillus* (+), dog epithelium (+), rat hair (+), *F. benjamina* leaves (+), and wood (+). The prick-prick test with the *Schefflera* leaf, performed on two different occasions, was twice positive (++; wheal ≥ 5 mm) as it was for the *Schefflera* twig (+; wheal = 3 mm), but it was negative in three nurses – one of them highly atopic – on our staff. The prick-prick tests of the patient's other green plants were all negative (*Spathiphylla*, *Aglo*, *Epimedium*, *Marginata*, *Yucca*, *Fragrans*, and *Cyssus*), as were the SPT and scratch tests for her plant care substances (Paraderil® 0.5%, Sano-Plant® 2%, and Promanek® 2%).

The CAP results were strongly positive for *F. benjamina* (k81) (11.20 kU/l, class 3);* weakly positive for latex (0.55 kU/l, class 1) and rat multidisk (0.59 kU/l, class 1); and negative for dog epithelium, *Aspergillus*, and *Alternaria* (<0.35 kU/l, class 0). The CAP results for *Schefflera* were weakly positive with the highest allergen concentrations (1000 µl: 0.39 kU/l, class 1; 2000 µl: 0.46 kU/l, class 1).

■ The clinical history and the positive SPT and CAP validated the diagnosis of allergic rhinoconjunctivitis and asthma caused by both *F. benjamina* (*Fb*) and *Schefflera* (*S*). By means of the positive CAP to the *S* leaves extract, the IgE-mediated nature of the positive SPT reactions with the leaves of *S* could be demonstrated. The exposure to these plants happened only at work. After terminating her employment and changing her profession, the patient remained symptom-free. The remaining mild seasonal rhinoconjunctivitis was due to the pollinosis.

■ The umbrella tree (*S*), of the Araliaceae family, is a widely distributed ornamental plant. The family comprises approximately 200 species. Outside tropical and subtropical regions, *S* grows only in nurseries. The most common species in households are *S. actinophylla* and *S. arboricola* (9). The cross-reactivity between *Fb* and latex (*Hevea brasiliensis*) is well known (10). There is also the possibility of cross-reactivity between *Fb* and *S* or another non-flowering green plant. Due to the weak reaction to *S* in the CAP examination, inhibition experiments to either *Ficus* or latex were not performed. Certainly, in the present paper, we demonstrated that another ornamental indoor plant can cause occupational respiratory allergy, and that *S* should therefore be considered a potential indoor allergen. If occupational allergy is suspected in a gardener, there should be no delay in undertaking a prick-

prick test with the plants in question. One can assume that allergies to ornamental plants will increase in the future.

Key words: Araliaceae; *Ficus benjamina*; indoor allergen; indoor plant; occupational allergy; *Schefflera*.

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Simultaneous IgE-mediated urticaria and contact dermatitis from latex

THE coexistence of IgE-mediated urticaria and contact dermatitis from latex proteins in the same individuals is rare and underreported. Several of such cases were noted and discussed.

We report the simultaneous existence of IgE-mediated urticaria and contact dermatitis in seven patients. The cases were selected from the pool of our patients with hypersensitivity to latex.

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