

Short communication

Allergy to *Ficus benjamina* (weeping fig) in nonatopic subjects

Axelsson IGK. Allergy to *Ficus benjamina* (weeping fig) in nonatopic subjects.

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Occupational allergy to *Ficus benjamina* (Fb), or weeping fig, occurs in about one in four plant-keepers. Sensitization to this plant occurs in about 3–4% of persons with clear-cut atopy. I now report on four female nonatopic patients with rhinoconjunctivitis who were sensitized only to weeping fig. All four had a positive skin prick test and RAST test to Fb. The identification of a preventable respiratory allergen is of considerable importance for the patient. Inclusion of Fb in the standard prick test panel may therefore be considered. Furthermore, the findings suggest that it may be unwise to choose Fb as an ornamental indoor plant.

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Ficus benjamina (Fb), or weeping fig, is a common, nonflowering plant used ornamentally in homes, workplaces, and public places. It is decorative and easy to cultivate, and it thrives indoors. The plant often grows into a small tree, reaching a height of 2–3 m.

In a study of occupational allergy to Fb, with high-degree exposure, 11/18 sensitized plant-keepers were found to have nonatopic status (1). During low-degree exposure to Fb in home surroundings and/or workplaces, only persons with clear-cut atopy were found to be sensitized to Fb (2). Recently, Bircher et al. (4) described 12 patients with perennial airways symptoms, sensitized to Fb, two of whom were nonatopic subjects. Schmid et al. (8) have reported on a nonatopic subject in whom rhinoconjunctivitis and asthma developed through exposure to a weeping fig that he kept in his bedroom. I now report on four nonatopic patients with rhinoconjunctivitis who became sensitized only to Fb.

Material and methods

Skin prick tests (SPT) were performed as described by Pepys (7), with a standard panel of 14 allergens: birch, timothy, mugwort, dog, cat, horse, feather, *Dermatophagoides pteronyssinus*, *D. farinae*, *Alternaria alternata*, *Cladosporium herbarum*, *Penicillium notatum*, *Aspergillus fumigatus*, and soybean (ALK, Copenhagen, Denmark). In SPT, a wheal corre-

sponding to the area of the histamine reaction was scored as 3+, a double area as 4+, half the area as 2+, etc. Nonatopy is here defined as a status with negative SPT to the above mentioned allergens. The Fb allergen extract, in a dilution of 1/100 w/w, was prepared as previously described (3). Total IgE was measured by PRIST (Pharmacia®), and specific IgE antibodies to Fb by the classic RAST test for case 4 and the CAP technology (K82, Pharmacia®) for the other three patients.

Case studies

Case 1. A 24-year-old nonsmoking woman without any personal history or heredity of allergy had had increasingly severe symptoms of conjunctivitis and rhinitis for the past 6 months. She worked as a hostess in a restaurant, and the symptoms occurred mainly at her workplace. There was a 2-m-high Fb in the restaurant. At home, she had a small, approximately 30-cm-high Fb. Allergologic investigation revealed sensitization only to Fb.

Case 2. A 54-year-old female psychologist with no personal history or heredity of allergic disease had suffered from alopecia totalis for 1 year. For 10 months, she had had daily symptoms of rhinitis, and in the last 3 months conjunctivitis had also appeared. The symptoms were most pronounced in the mornings. At home, she had two Fb, 2 m high, that she

had cultivated for the last 15 years. At her workplace, there were two Fb, 1.5 m high, which had been there for 2 years.

Case 3. A 49-year-old nurse has probably had slight symptoms of hay fever during a few spring seasons in childhood. No allergologic investigation was performed at that time. For 5–6 years, she had had increasing symptoms of rhinitis, which mainly occurred at home. Once when she cleaned and trimmed two Fb, 1.5 and 2 m high, respectively, which she had had for 10 years, she had a strong allergic reaction with periorbital edema, itching of her eyes, and rhinitis. A histamine provocation test showed increased bronchial reactivity.

Case 4. A 38-year-old female clerk with no personal history of allergic disease had been suffering from rhinitis and sometimes conjunctivitis for the last 20 years. The symptoms often occurred suddenly at home in the evening. Her office was decorated with an abundance of large FB. At home, she had two 50-cm-high Fb.

Results

All four patients were positive for Fb in SPT and RAST and negative to the other 14 allergens in SPT. The patient in case 3 was also negative to birch in RAST. The results are summarized in Table 1. The symptoms diminished in all patients after elimination of the plants.

Table 1. Skin prick test (SPT) and RAST to *Ficus benjamina* in four female nonatopic subjects with rhinoconjunctivitis

	Age (yr)	SPT	RAST KU/I	Total IgE KU/I
Case 1	24	5+	51	74
Case 2	54	3+	2.9	120
Case 3	49	2+	2.4	29
Case 4	38	4+	1.3*	5

*PRU/ml.

Discussion

In a previous study, comprising 395 subjects who underwent allergologic investigation, I found sensitization to Fb only in subjects with clear-cut atopy with an occurrence of 3.6% (1). This is of the same magnitude as for sensitization to the most common mold (*Cladosporium*) allergy in Sweden. Patient no.

3 might have had an atopic status according to her personal history, although both SPT and RAST to birch were negative. Of these four patients, only no. 3 had noticed FB-related symptoms. The other three would probably have remained undiagnosed if Fb had not been included in the standard panel for the skin prick test. The allergens emanate from the milky sap (latex) of the plant (2). I have concluded that water diffuses through the leaf and brings out the allergens by osmosis. On the upper leaf surface, there may be dust, which will suck up the water; the water then evaporates and the allergens mingle with the dust and become airborne, and hence may be inhaled. Clinically, as in other dust allergies, allergy to Fb produces more or less perennial symptoms and the offending agent (Fb) might be difficult to identify. Another example of an insidious, aggressive indoor allergen source is the wild silk waste used in bed quilts (5, 6).

The identification of a preventable respiratory allergen is of considerable importance for the patient. Therefore, inclusion of Fb in the standard prick test panel may be considered. Furthermore, the findings suggest that it may be unwise to choose Fb as an ornamental indoor plant.

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