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We present the case of a 35-year-old woman who, in February 1997, immediately after eating a dried fig, presented palatine pruritus, sneezing, nasal obstruction, hydroporrhea, sore throat, sibilant dysnea, cough, and bilateral palpebral angioedema that ceased several hours after treatment with corticosteroids and epinephrine. She had tolerated the eating of figs up to that time and since then had not eaten any. She had had a specimen of *F. benjamina* in her house for around 6 years in 1996, after touching its leaves, she had suffered an episode of severe bilateral palpebral angioedema, watery eyes, ocular pruritus, and dry cough. Since then, she had also experienced blocked nose, hydroporrhea, watery eyes, and dry cough in her domestic environment, the symptoms disappearing when she left the house.

Skin prick tests were positive with dried fig, skin and pulp of green fig, leaf and latex of *F. benjamina* (prick-prick), and commercial extract of fig (prick); they were negative with kiwi, banana, hops, chestnut, *Hevea brasiliensis* latex, common

environmental pneumoallergens (prick), and *Ficus lyrata* (prick-prick).

Total IgE was 23.6 kU/l. Specific IgE to fig was 4.2 kU/l; to *H. brasiliensis* latex, <0.35 kU/l (CAP System™, Pharmacia Diagnostics, Uppsala, Sweden).

Spirometry gave values within reference limits. The nonspecific bronchial hyperreactivity test with histamine was positive (PC₂₀: 0.63 mg/dl).

SDS-PAGE immunoblotting (IgE) and inhibition were performed with extracts prepared by us with dried and fresh figs, and with *F. benjamina* (3). In SDS-PAGE immunoblotting, a band of 35 kDa was detected in dry fig and fresh fig. The *F. benjamina* extract contained two allergens of 35 and 19 kDa that were totally and partially inhibited by fresh and dried fig, respectively. The essay revealed cross-reactivity between *F. benjamina* and fig (Fig. 1). The patient refused a bronchial challenge test with the extract of *F. benjamina*, claiming to be certain of the association between exposure and the symptoms she had presented. By our

Anaphylaxis after eating figs

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Key words: anaphylaxis; cross-reactivity; *Ficus benjamina*; *Ficus carica*; fig fruit.

• THE fig (*Ficus carica*), which belongs to the family Moraceae and the genus *Ficus*, has been until now a rare cause of food allergy. *Ficus benjamina*, a member of the same family (1), known also as Java willow, Ceylon willow, or Bali's fig tree, is used frequently to adorn public buildings and homes (2).

Underlying IgE sensitization to *Ficus benjamina*.

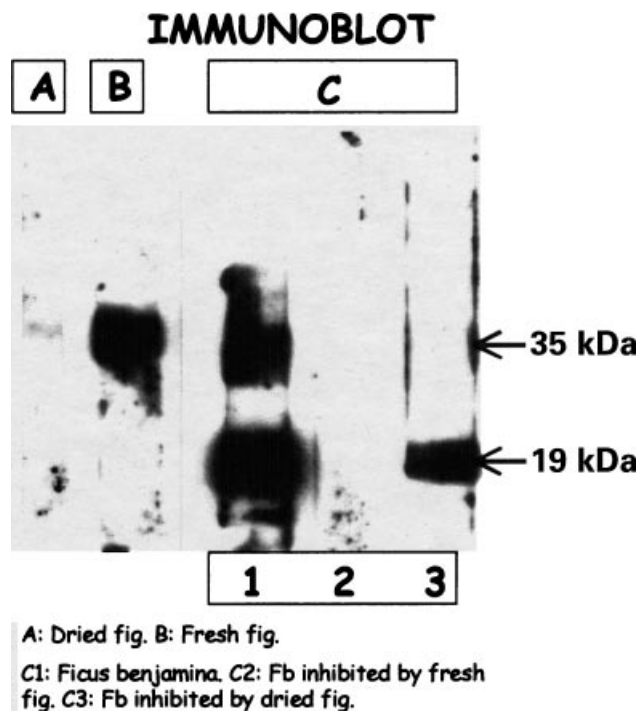


Figure 1.

recommendations, she removed the *F. benjamina* from her house, and a few weeks later her symptoms disappeared.

Cross-reactivity between *F. benjamina* and fig has been reported in the literature, in some cases based only on clinical evidence; in others, on CAP inhibition (4). Axelsson et al. identified three major allergens in the sap of *F. benjamina*, with molecular masses of approximately 25–30 kDa (25, 28, and 29 kDa) (5), but until now, the allergenic proteins of fig had not been identified. In our study, we detected IgE-binding bands of 35 and 19 kDa in *F. benjamina* that were inhibited by fig. Possibly, common allergens between these two plants do not correspond to the major allergens described previously. In fig we detected only a 35-kDa protein antigenically related to the 35- and 19-kDa allergens from *F. benjamina*. It is likely that the allergy to fig was a consequence of the initial sensitization to *F. benjamina*, as suggested previously by others (4, 6–8), and this is what appears to have occurred in our patient. We did not find sensitization to latex in our patient, nor to any allergen that had demonstrated cross-reactivity in other

studies, such as those of kiwi, banana, hops, and chestnut (4, 8).

In conclusion, we present a case of initial sensitization to *F. benjamina* which, after several years of exposure, developed into allergy to fig that produced the anaphylactic reaction for which the patient attended our clinic. We have characterized the allergenic proteins and demonstrated the existence of cross-reactivity between two species of the genus *Ficus*.

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