

the urticating properties of these caterpillars. An IgE-mediated mechanism of hypersensitivity to these caterpillars has been demonstrated in only one study in 21 pine-forest workers (5). Specific IgE antibodies directed against pine processionary and oak processionary caterpillars assayed by ELISA were detected in four of the 21 samples studied by these authors. Three out of four positive samples had significant levels of IgE directed against purified thaumetopoein and, in Western blotting, each of the four sera had IgE-reactive bands with a pine processionary caterpillar extract. The reactive sera recognized thaumetopoein (28 kDa) and a 45-kDa protein. Our work is the second study to demonstrate the presence of IgE directed against pine processionary caterpillar antigens and the first description of an IgE-mediated anaphylactic reaction to these caterpillars.

In our department, we see some patients with cutaneous/ocular symptoms after several hours of walking in a pine forest without direct contact with caterpillars. These symptoms do not appear in other equally exposed accompanying persons. Moreover, *T. pityocampa* urticating hairs should be considered important airborne insect allergens (4); further research with this new allergen, particularly in pine-forest workers, is necessary.

Key words: anaphylaxis; caterpillar; occupational allergy; *Thaumetopoea pityocampa*.

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Accepted for publication 1 July 1997

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ALLERGY 1997;52:1244-1245

ACKNOWLEDGMENT

The study was supported by a grant from the Fundación de la Sociedad Española de Alergología e Inmunología Clínica.

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Oral allergy syndrome induced by spinach

SPINACH (*spinachia*) is a vegetable of the Chenopodiaceae family. Other members of this group are beet and chard. IgE-mediated allergy to spinach has been previously described, although there are only a few reported cases (1).

■ We present a 48-year-old woman who showed an episode of tongue itching and lip edema, 5 min after eating spinach cooked at home. One month later, she developed uvular edema, oropharyngeal itching, and facial angioedema while eating fresh spinach. Previously, she had readily tolerated spinach and other vegetables. She had no family or personal history of atopy.

Prick tests for the most common inhalant and food allergens other than Chenopodiaceae

were negative. Cutaneous tests with spinach and other members of the Chenopodiaceae family showed the following results:

A case of oral allergy syndrome due to spinach is presented; cross-reactivity with chard was demonstrated.

Food	Method	Resulting wheal (mm)
Spinach (commercial extract)	Prick	10×16 with pseudopods
Spinach (fresh)	Prick-prick	8×10
Chard (commercial extract)	Prick	6×9
Chard (fresh)	Prick-prick	4×8
Histamine	Prick	4×5

The total IgE level was 466 IU/ml, and the specific IgE level for spinach (CAP System) was 2.62 kU/l (class 2). The oral challenge test with chard was negative.

■ Oral allergy syndrome (OAS) is a type of food allergy resulting from direct contact between food and oral mucosa. It seems to be related to the very high concentration of mast cells in the oropharyngeal mucosa, leading to a wide interaction between allergen and specific IgE bound on the mast-cell surface (2).

Allergy to fresh fruits and vegetables is the most frequent cause of OAS. Normally, it affects patients who are allergic to pollen, and only occasionally is it not associated with this allergy (3).

Spinach contains histamine (37.5 mg/dl), which can cause pseudoallergic reactions. However, our patient had OAS induced by IgE-mediated hypersensitivity.

Cross-reactivity with chard was demonstrated by prick test, but oral challenge was negative. The existence of cross-sensitivity *in vivo* and *in vitro* without clinical manifestations is common in food allergy.

Although sensitization to pollen has been related to OAS, it was not demonstrated in our patient.

Key words: chard; Chenopodiaceae; oral allergy syndrome; spinach.

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Accepted for publication 23 July 1997

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ALLERGY 1997;52:1246-1246

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Oral "desensitization" of maculopapular exanthema from ciprofloxacin

IN the last decade, a so-called desensitization, or rechallenge with an increasing number of different drugs which had elicited a large variety of immediate and delayed-type hypersensitivity reactions, has been reported. Most experience has been gathered with β -lactam antibiotics in severe infections and with sulfonamides in the prevention and treatment of HIV-related infectious diseases (1, 2). In patients with cystic fibrosis, a repeated antibiotic therapy for pulmonary infections is often needed; on the other hand, an increased risk of developing hypersensitivity reactions, particularly to antibiotics, has been reported, and the prevalence of sensitization to β -lactams and other antibiotics may

be high (3, 4). We have observed two patients with cystic fibrosis who developed pruritic maculopapular exanthema while being treated with oral ciprofloxacin for *Pseudomonas* infection, and who both had a positive rechallenge. A graded oral reintroduction of ciprofloxacin was successful.

■ In a 15-year-old girl, slightly pruritic maculopapular exanthema appeared on day 8 of treatment and spontaneously disappeared after withdrawal. Upon re-exposure to a full single dose, the exanthema reappeared within 2 days. Prick and patch tests with penicillin G, amoxicillin, and ciprofloxacin were negative. Intracutaneous tests were denied.

After 1 month of treatment of a 23-year-old man, febrile exanthema occurred, subsiding after withdrawal. Two weeks later, ciprofloxacin was reintroduced at full dose; after 2 days, severe maculopapular exanthema and fever reappeared. Skin tests were not performed.

■ Further antibiotic treatment was indicated, and after informed consent had been obtained, a controlled reintroduction was attempted. Due to the delayed onset of the exanthema, a slow oral protocol was established (Table 1). Initially, the doses were taken from a ciprofloxacin ampoule (2 mg/ml) and mixed with syrup to mask the unpleasant taste. From day 5, tablets (250 mg) were used. No adverse reactions occurred. A treatment course of 2×500 mg/day for several weeks was uneventful. Some months later, another treatment course with ciprofloxacin was necessary in both patients. Because loss of sensitivity is

usually not permanent after drug withdrawal, the reintroduction procedure was repeated. An accelerated regimen (day 1: 2×125 mg, day 2: 2×250 mg, day 3: 2×375 mg, day 4: 2×500 mg) was used, again without adverse events. In patient 1, the latter protocol was successfully used several times.

■ Ciprofloxacin, a fluorinated quinolone, is very effective in treating bronchial infection by *Pseudomonas* orally; however, it may elicit various adverse hypersensitivity reactions such as pruritus,

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