

Millet, a potentially life-threatening allergen

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Key words: cross-allergenicity; food-induced anaphylaxis; millet.

● APART from medication and insect stings, intolerance to food is one of the main triggers of systemic anaphylaxis. In intolerance to food, crustaceans, fish, and peanuts are the most relevant allergens (1–3).

The patient presented here was a 51-year-old woman in good health without history of anaphylaxis. After ingestion of a millet dumpling, she immediately developed generalized urticaria, mucosal swelling, shortness of breath, and hypotonic reactions.

The millet dumpling consisted of millet, leek, celery, nutmeg, carrot, and coarse wholemeal

breadcrumbs.

The patient

could not

remember any

consumption of millet before, but had tolerated all the other ingredients without allergic reactions in the past. She mentioned having had a budgerigar some years before. Tolerating the bird itself very well, she complained of asthmatic attacks while cleaning the bird cage.

All the ingredients of the millet dumpling were tested with dermal scratch tests with native allergens. Ten healthy subjects were used as the control group for positive skin test reactions. Other cereals were tested with intradermal skin tests with commercial allergens. Specific IgE against different kinds of millet and cereals was measured with the CAP System. Specific IgE measurements for

budgerigar feathers and feces were performed, and skin tests were carried out.

The skin scratch test showed strongly positive reactions to millet. All the other ingredients were negative. The scratch test with millet was negative in all the healthy controls. Intradermal testing was positive for rye, oats, maize, and barley. There were no skin test reactions to budgerigar allergens. The results of specific IgE measurements showed elevated levels for nearly all the tested cereals, especially millet. The results for budgerigar allergens were negative or only minimally elevated.

Anaphylaxis to millet was first reported in 1981 by Parker et al. (4). Since then, other cases have been reported sporadically (5–8), showing that anaphylaxis to millet is still extremely rare. In the presented case, millet was proven to be the cause of anaphylaxis by positive skin tests and elevated specific IgE levels. In view of the life-threatening reaction and the unambiguous findings, a double-blind, placebo-controlled food challenge was not performed. The patient's asthmatic reactions while cleaning the bird cage in the past were most likely due to the hypersensitivity to millet-containing birdseed; allergy to the bird itself was excluded by the patient's history, IgE measurements, and skin tests.

Combined inhalative reactions and systemic anaphylaxis has not been reported in the past. Cross-reactivity to cereals could be demonstrated in the presented case and in all the other published reports by positive skin tests and/or specific IgE measurements. Clinically relevant cross-reactivity has never been reported. Millet is a rare nutritive and inhalative allergen, but may

induce potentially life-threatening anaphylaxis. The increased use of millet in "natural diets" may increase the incidence of millet-related allergic reactions.

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Accepted for publication 5 December 2000

Allergy 2001; 56:350

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ISSN 0105-4538

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