

On the basis of the clinical history, SPT, and RAST, NRL allergy was diagnosed. This report stresses the importance of testing for NRL allergy in high-risk subjects (particularly children with multiple surgical procedures) (1). Finding out that a subject is NRL allergic results in adequate preventative measures; moreover, it may throw light on episodes of allergic symptoms otherwise difficult to interpret.

This case also shows that nonoccupational NRL allergy symptoms, which are more commonly reported to occur following direct contact (2), may also be elicited by indirect contact (exposure to variable levels of airborne NRL allergens). Swanson et al. have measured NRL aeroallergen concentrations in a medical center: in areas where powdered latex gloves were frequently used, this ranged from 13 to 121 ng/m³, being as high as 99.8 ng/m³ in the orthodontic clinic, while in areas where powdered latex gloves were never or seldom used, concentrations were much lower, ranging from 0.3 to 1.8 ng/m³ (3). Recent reports suggest that exposure even to such low concentrations may represent a risk for sensitized subjects. In fact, Baur et al. reported that symptoms to NRL may occur after exposure to relatively low levels of airborne allergens, 0.6 ng/m³ being a critical threshold for symptom elicitation (4). Such a possibility should be particularly likely for highly sensitized subjects (such as our subject).

In our subject, symptoms occurred in an environment (the waiting room) where latex gloves were never used. Though we did not measure the concentration of latex aeroallergens in the dentist's office, we assume that NRL aeroallergens were present not only in the dental office, where latex gloves were frequently used, but also in the adjacent waiting room. It has been reported that in non-forced-air-heated buildings, there is a dispersion of latex aeroallergens from areas where powdered latex gloves are used to areas under latex restriction (5). Transportation of allergens, as is already well known to happen with cat allergens (6), seems to apply to latex, too.

This report underlines the importance of submitting high-risk subjects to diagnostic procedures for NRL allergy, so that adequate precautions may be taken for the admission (access) of sensitized subjects to health-care settings with high frequency of use of latex gloves. This case also encourages the undertaking of studies to assess NRL aeroallergens in public places.

Key words: aeroallergens; allergy; conjunctivitis; latex; urticaria.

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Pizza, an unsuspected source of soybean allergen exposure

ITALIAN pizza is one of the most popular foods everywhere. Allergic/pseudoallergic reactions following the ingestion of this food have been reported, and they are not uncommon in everyday clinical practice. Nevertheless, identifying exactly the agent responsible for these reactions is a difficult task due to the wide variety of ingredients used for preparing pizza (tomato and tomato sauce, cheese, fish, mushrooms, yeast, flour, vegetables, etc.); in fact, tomato sauce (or its additives) is the most commonly suspected causal agent. Soybean

proteins are well known as allergens, and soybean is widely used in the preparation of many foods, but this possible allergenic source is often hidden or unsuspected. We describe herein the case of a young woman suffering from severe systemic reactions due to the soybean flour contained in pizza.

S.R., a 32-year-old woman, came to our observation reporting a clinical history of more than 10 acute systemic reactions, in the last 2 years, including generalized urticaria, angioedema of the face and tongue, laryngeal edema, bronchospasm, and anaphylaxis. These clinical aspects were associated in various combinations. The patient had emergency care on four occasions, requiring subcutaneous epinephrine. The remaining episodes were controlled at home by the general practitioner, with

A case of severe systemic reactions to a hidden food allergen.

The patient had a long history of allergic reactions, with the first episode occurring at the age of 10 years, when she developed urticaria and angioedema after eating a pizza. She had similar reactions on several occasions, but they were not considered as allergic reactions. In the last 2 years, however, she had several severe reactions, including generalized urticaria, angioedema of the face and tongue, laryngeal edema, bronchospasm, and anaphylaxis. These clinical aspects were associated in various combinations. The patient had emergency care on four occasions, requiring subcutaneous epinephrine. The remaining episodes were controlled at home by the general practitioner, with

oral corticosteroids and antihistamines. Three episodes (two anaphylactic reactions) occurred after eating pizza in the same restaurant. Other possible causes of anaphylaxis (drug intake or exercise) were excluded by the clinical history.

Clinical examination was negative, and no abnormality of the routine biochemical parameters was detectable. We found 280 IU/ml total IgE and a mild (++) skin positivity for mugwort. Skin tests for the common foods were also performed by commercial extracts, including cereals, meats, fish, egg, ovalbumin, ovomucoid, lactalbumin, yeast, pea, peanut, soybean, onion, garlic, tomato, parsley, pear, peach, apple, walnut, hazelnut, and almond. Skin positivity was found for corn, rice, pea, peanut, and soybean; the last named evoked a skin response approximately twice that of the other allergens. The skin test for latex was negative. By means of the CAP test (Pharmacia, Uppsala, Sweden), high specific IgE levels (>0.35 IU/ml) to corn (0.53), hazelnut (1.75), pea (2.14), bean (0.45), parsley (8.65), onion (3.43), and soybean (3.08) were also detected.

Soybean flour was identified as responsible for one of the anaphylactic reactions due to pizza. In this case, the patient ate a pizza of which the ingredients were yeast, flour, cheese, tomato, and salt. Since the skin test and CAP assay were negative for tomato and yeast, we focused our attention on flour and ascertained that soybean flour was usually employed for preparing pizzas in that restaurant. Due to the severity of the previous reaction, we did not perform a double-blind challenge with soybean.

Severe reactions and even death due to the ingestion of the offending food have been reported in allergic subjects (3, 4). In this sense, soybean may be a dangerous allergen, since it is widely used in the preparation of foods and is usually a "hidden allergen". In fact, soybean can be employed as tenderizer, emulsifier, and protein filler, although this information is not always provided on labels (5). Other possible hidden sources of soybean are sausage products (6) and pizza, as herein reported. We hypothesize that a hidden or unsuspected ingestion of soybean products or derivatives may be responsible for some of the severe episodes reported by patients. The present report further highlights the need for a careful, detailed investigation of food ingredients in the case of unclear reactions to foods.

Key words: food allergy; hidden allergens; soybean.

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Allergy to latex condoms

THE first English language report of an immediate allergic reaction to latex appeared in 1979 (1). Since then, immediate allergic reactions provoked by a large variety of natural rubber latex objects, including condoms, have been reported widely (2, 3). In 1989, Turjanmaa & Reunala reported that 7/29 (24%) of their latex-allergic women patients had had a local allergic reaction on contact with a latex condom (4). Since then, there has been no other investigation of the frequency of this problem. Therefore, given the continued importance of latex allergy, we investigated the prevalence of allergic reactions to condoms among the latex-allergic patients seen in our allergy consultation service since 1987 (Table 1).

We mailed questionnaires to 374 patients previously found to have clinically significant allergy to latex that had been established by the presence of a strong clinical history, a positive skin prick test (diameter of wheal and flare at least 75% of the diameter of the positive control, 9% codeine phosphate) with standardized latex extract (Laboratoires Stallergènes SA), and a CAP System RAST FEIA of at least class 1 in most cases. A total of 238 completed questionnaires (64%) were

Condoms cause local and/or systemic reactions in 84% of latex-allergic persons who use them.

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