

Risks of latex avoidance

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Key words: allergen avoidance; anaphylaxis; natural rubber latex.

● ANAPHYLAXIS to latex is now well recognized and is on the increase. A recent estimate in the USA indicates that there are 220 latex-induced anaphylactic reactions per year (1). An earlier study of reports to the Food & Drug Administration identified more than 1100 cases of latex anaphylaxis, with 15 deaths (2). We describe the onset of anaphylaxis to latex developing in a patient with longstanding but undiagnosed latex allergy causing wheeze and angioedema only after latex avoidance measures were introduced.

The patient was a 34-year-old female who worked as a bank clerk. She was referred with allergic problems of asthma and rhinitis. She also complained of vomiting after certain foods. All the symptoms were of long standing. The referral from the primary care physician did not mention latex allergy.

However, a careful history identified reactions to latex-containing clothing, condoms, gloves and during dental and gynaecological procedures, characterized mainly by wheeze. There was no history of anaphylaxis to latex. She was intolerant of avocado pears, potatoes and tomatoes, with symptoms of immediate nausea and vomiting. She had seasonal rhinitis beginning in March, suggestive of birch pollen allergy and tended to avoid stone fruits, such as apples and pears. She had a previous severe reaction while taking ibuprofen, although this was after an operation when she had a latex drain inserted into her leg. She was using salmeterol, high dose inhaled beclomethasone and salbutamol inhalers, nasal triamcinolone. Asthma control was poor, with significant nocturnal wheeze. She was said to have irritable bowel syndrome. She had recurrent tonsillitis. Examination revealed very large tonsils for her age, the peak expiratory flow was 490 l/min. There were no other abnormalities on physical examination.

Latex allergy was diagnosed and counselling was given on avoidance of latex and associated foods. At follow-up, strict latex avoidance had been introduced both at home and in her workplace. There had been a significant improvement in her asthma, with a reduction in the use of rescue medication and nocturnal symptoms. The abdominal symptoms had ceased. The clinical impression was that most of her chronic symptoms were owing to low-level environmental latex exposure. Specific IgE to latex was not detected in the blood but skin-prick test with ALK-Abello skin-prick test solution was positive at 10 Hep strength, confirming latex sensitization.

Anaphylaxis to latex was not a feature of the clinical presentation until *after* latex avoidance was instituted. Two severe episodes have occurred, one triggered by kissing her daughter, who had been blowing up balloons at school and the second by the introduction of a large number of latex stress balls into her workplace. On both occasions, there was immediate onset of laryngeal edema, acute respiratory distress, hypotension and on one occasion loss of consciousness. Both responded to administration of epinephrine in the community with an auto-injection device [Epipen].

This case illustrates that strict allergen avoidance may make reactions on subsequent allergen exposure more severe, and may indicate that continuous low level environmental exposure may produce an incomplete tolerance. All published information on severe IgE-mediated latex allergy indicates that avoidance is the cornerstone of further reactions (3), but this case indicates that this advice may actually lead to fewer but more severe reactions. This may have implications for advice to allergic patients on allergen avoidance.

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Accepted for publication 25 September 2001
Allergy 2002; 57:180
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ISSN 0105-4538

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TARC in allergic disease

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Key words: allergic diseases; plasma TARC level; thymus and activation-regulated chemokine (TARC).

● THYMUS activation-regulated chemokine (TARC/CCL17) is a member of CC chemokine that is transiently expressed in phytohemagglutinin-stimulated peripheral blood mononuclear cells (PBMC) and constitutively and selectively in the thymus (1). Recently it has been reported that the TARC receptor CCR4 is selectively expressed in T helper (Th2) cells and that serum TARC

Thymus and activating-regulated chemokine may be a useful marker for disease

level is associated with disease activity in atopic dermatitis (2,3). This is the first report describing plasma TARC levels in patients with bronchial asthma and allergic rhinitis.

Plasma TARC concentration was measured by ELISA (R&D systems, MN, USA) in 50 healthy volunteers who previously showed no allergic symptoms, 30 patients with atopic dermatitis, 64 patients with bronchial asthma, and 22 patients with allergic rhinitis. In this study patients treated with drugs were excluded. The mean concentration of TARC in healthy volunteers was 31.9 pg/ml (SD14.8); significantly higher than in non-allergic volunteers, and than

patients with atopic dermatitis ($p<0.001$), bronchial asthma ($p<0.001$), and allergic rhinitis ($p<0.001$): 325 pg/ml (287), 271 pg/ml (264), and 147 pg/ml (101), respectively, (Fig. 1). IgE levels and numbers of peripheral eosinophils were not necessarily correlated with the TARC level. Though Th2 cytokines such as IL-4, IL-5 and IL-13 play important roles in allergic diseases it is difficult to efficiently detect them, because of the poor sensitivity of assays of peripheral blood. We measured these three plasma cytokines but even IL-13, which is the easiest of the three to detect, was detected in only 54 of the 116 patients, while TARC was detected in all patients. In our study, following prednisolone treatment in 6 patients with bronchial asthma, the plasma TARC levels decreased to those of the healthy volunteers (pre/post: 237/35.6 pg/ml, $p<0.005$).

These results suggest that the measurement of plasma TARC may be a new useful diagnostic marker not only of atopic dermatitis but also bronchial asthma and allergic rhinitis.

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Accepted for publication 30 August 2001

Allergy 2002; 57:180-181

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ISSN 0105-4538

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IgE to Bet v 1/Bet v 2 in UAS

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Key words: food allergen; hypersensitivity; recombinant birch pollen.

• SOME patients with birch pollen allergic hypersensitivity also refer symptoms of the 'oral allergy syndrome' when they eat fresh fruit, certain vegetables and hazelnuts (1-4). Cross-reactivity between apples and birch pollen occurs not only at the serologic level but also at the cellular level (4). In order to evaluate the relationship between specific IgE levels for Bet v 1/ Bet v 2 with 11 types of food (apple, celery, carrot, hazelnut, tomato, potato, cucumber, peanut orange, kiwi and turkey meat) serum IgE levels were determined by FEIA (Pharmacia, Upjohn) in 33 patients with specific IgE to birch pollen.

Twenty patients (61%) were positive for Bet v 1, four patients (12%) for Bet v 2, and six patients (18%)

Positivity to apple is the best predictor.

for both allergens. Twelve out of the 30 patients (40%) sensitized to recombinant allergens reported symptoms of the 'oral allergy syndrome'.

A significant correlation (Spearman's rank test) was identified between Bet v 1 IgE and apple IgE ($r=0.37$, $P=0.03$). Significant positive correlations ($P<0.01$) were also found for Bet v 2 IgE and 10 of the 11 foods (not for turkey meat).

As shown in Table .1, all patients with IgE specific only for Bet v 2 also had IgE for the same three foods (apple, peanut and carrot), while all those with IgE for both Bet v 1 and Bet v 2 had IgE for the same five foods (apple, peanut, carrot, tomato and potato). Specific IgE was observed most frequently for apple and was present in 93% (28/30) of the patients sensitized to either or both recombinant birch pollens.

Symptoms of the 'oral allergy syndrome' were reported by 35% (7/20) of the patients positive for Bet v 1

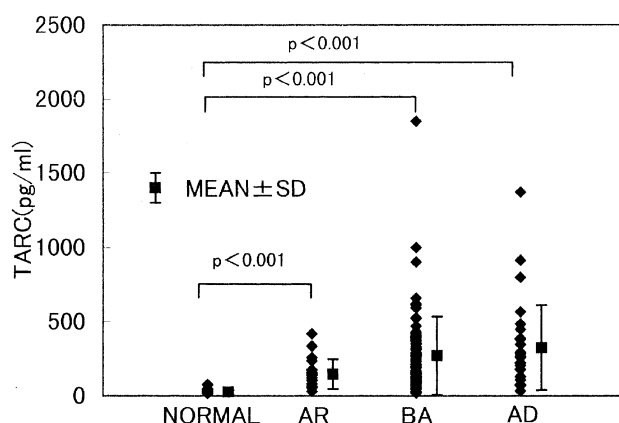


Figure 1. Comparison with plasma TARC level in healthy volunteers (NORMAL) and the patients with atopic dermatitis (AD), bronchial asthma (BA) and allergic rhinitis (AR).