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Anaphylaxis to buckwheat

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Key words: anaphylaxis; buckwheat; cross-reactivity; fig; latex.

• In patients sensitized to buckwheat or fig, cross-reactivity to natural rubber latex (NRL) has been described and confirmed by RAST inhibition in only a few patients (1–3). We here present a patient with NRL allergy who developed an anaphylactic reaction after ingestion of a muesli bar containing buckwheat and fig.

A 27-year-old nurse with known allergy to NRL developed prickling of her palms,

generalized urticaria, nausea, and mild laryngeal edema 10 min after eating a few pieces of a

muesli bar. Skin prick tests with common inhalants

(house-dust mite, and grass and birch pollen) and foods (hazelnut, celery, almond, and soya) in commercially available extracts showed no positive reactions 8 weeks later. In contrast, a prick-to-prick test of the muesli bar itself yielded an immediate 2+ reaction. After contacting the producer, we were provided with all 20 ingredients of the muesli bar: prick-to-prick tests were now performed with apple, blackberry powder, buckwheat, candied orange peel, cherry powder, citric acid, fig, hazelnut, honey, marzipan,

A case of cross-reactivity with latex and fig.

natural flavor, raspberry powder, rolled oats, rose hip powder, sea buckthorn powder, soyapan, sultana, wafer, wheat bran, and whole soya. In this patient with NRL allergy, buckwheat and fig (1, 4–6) were the most suspicious ingredients, but only to buckwheat was an immediate 2+ skin test reaction found. Specific serum IgE antibodies were found to NRL (18.1 kU/l; CAP class 4), buckwheat (3.29 kU/l; CAP class 2), and fig (0.37 kU/l; CAP class 1). Total serum IgE was not elevated (77.8 kU/l). Preparations of NRL and fig strongly inhibited the binding of the patient's IgE antibodies to the buckwheat CAP (Fig. 1), whereas buckwheat or fig extracts inhibited IgE binding to the NRL CAP to a lesser degree. No oral challenge test could be performed in this patient. As the patient

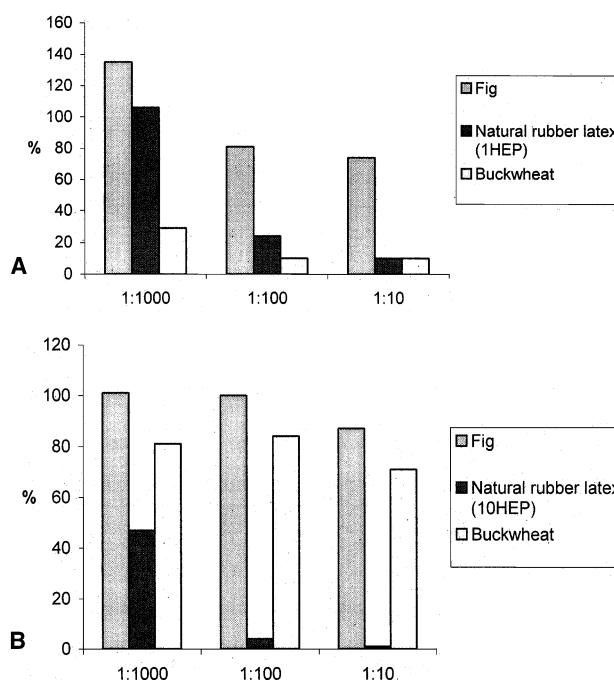


Figure 1. A) Inhibition of IgE binding to buckwheat CAP by buckwheat, natural rubber latex, or fig. Patient's serum was preincubated with respective allergen preparations overnight. Percentage of binding is shown in relation to results obtained with serum not preincubated (100%). B) Inhibition of IgE binding to natural rubber latex CAP by buckwheat and fig. Patient's serum was preincubated with respective allergen preparations overnight. Percentage of binding is shown in relation to results obtained with serum not preincubated (100%).

Preparations for inhibition

Fig: 3 g mashed fig incubated in 1 ml buffer for 30 min, then centrifuged.

Buckwheat: 1 g ground buckwheat incubated in 10 ml buffer for 30 min, then centrifuged.

Natural rubber latex: Soluprick SQ latex, 1 or 10 HEP (ALK Abelló, Hørsholm, Denmark).

was reported to tolerate ingestion of fig, buckwheat was probably the elicitor of the patient's anaphylactic reaction.

These results confirm the presence of antibodies cross-reacting to NRL, buckwheat, and fig in the same patient, an effect which has not been reported before. Development of buckwheat allergy due to cross-sensitization with NRL is highly probable in our patient since she was not heavily exposed to buckwheat products (e.g., at work), which are the usual source of buckwheat sensitization in Europe (7). Patients with NRL allergy should be aware of possible associated food hypersensitivities to buckwheat or fig.

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