A case report of high risk atopic children with positive family history of anaphylactic reaction to buckwheat

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Buckwheat, which has been abundantly consumed in Asian countries and has been increasingly popular in the United States, Canada, and Europe, can be a potent allergen when ingested or inhaled. Common buckwheat (Fagopyrum esculentum) is known to cause severe anaphylactic reactions in adult individuals. However, type I allergy to buckwheat is rarely seen in children. Our case is reported a 45-year-old man developed life-threatening anaphylaxis after eating food containing buckwheat on 3 different occasions. He had tolerated all kinds of wheat for many years. Few minutes after eating buckwheat home-baked bread experienced urticaria, dyspnoea, wheezing, as well as symptoms of gastrointestinal tract nausea and vomiting. After circulatory collapse he admitted to the ER requiring restitution. It is interesting to mention that the third case of anaphylaxis was after intake of buckwheat flour as the hidden allergen in pastry. Prior to the first episode of anaphylaxis he has a positive history of respiratory allergies (asthma and allergic rhinitis) as well as positivity to multiple inhalator allergens (mixture of different grass pollen, ragweed, and tree pollens). Skin testing by the prick technique revealed positive reaction to buckwheat with negative reactions to other foods including wheat, egg white, and milk. A prick-to-prick test with buckwheat flour was also positive. His daughter suffered from the respiratory allergies (asthma and allergic rhinitis), atopic dermatitis since birth and complains of mouth itching while consuming hazelnut and walnuts. Her in vitro tests were positive to alpha lactalbumine, casein, peanuts, acarus, dogs’ and cats’ hairs, horse’s and cow’s epithelium as well as to the rodent epithelium, mixed grass pollens, tree pollens (birch, beech, ragweed. Total serum IgE were extremely high 1065. According to the literature 11s globulins in buckwheat have the potential to induce IgE antibodies cross-reactive with 11S globulins in other, botanically unrelated foods and may induce anaphylactic reactions. In developing countries sophisticated diagnostic methods are not available, so we need to make a detail plan for preventing anaphylactic reaction in children with positive family history of anaphylactic reaction to food allergens without severe restrictive diet.