

Nya avhandlingar

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Symptoms of food hypersensitivity in relation to sensitization to food and health-related quality of life in children

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Intensive research in the field of food hypersensitivity (FHS) and food allergy has resulted in determination of serum levels of IgE antibodies to food above which the probability of demonstrating symptoms is $\geq 95\%$. However, data concerning clinical phenotypes of FHS and the relationship between sensitization to food and symptoms are presently scarce. Moreover, research on the impact of FHS on health-related quality of life (HRQL) is still in its infancy.

Accordingly, the general aim of this thesis was to characterize children reported by their parents to have FHS with regards to symptoms, sensitization, different phenotypes and the impact on HRQL, employing a population-based study design. A prospective birth cohort (BAMSE) of 4,089 children was followed up to the age of 8-9 years by having their parents fill in questionnaires concerning the children's exposures and health outcomes at various time-points. Blood samples were collected at 4 and 8 years of age for analysis of IgE antibodies to food. At 9 years of age, a separate questionnaire concerning HRQL was filled out by the parents of a subgroup of 1,376 children.

Paper I describes different phenotypes of FHS observed in children during their first 8 years of life. An increased risk of having asthma, rhinitis and/or atopic eczema at 8 years of age was seen for children reported to have FHS at an early age. Children who demonstrated only a single symptom of FHS and/or little or no sensitization to food had the most favourable prognosis for later remission of their food-related symptoms

Paper II characterizes different aspects of sensitization and reported FHS in 4-year-old children. Half of all the children with gastrointestinal symptoms or atopic dermatitis exhibited only a single symptom and less than 50% of these same children were sensitized to food. Among the children with reported urticaria, facial oedema or wheeze related to food, a majority had multiple symptoms and were sensitized to food as well.

Paper III documents a positive association between reported FHS and elevated levels of IgE antibodies to milk, eggs or fish. For peanuts, this association was also significant, although not as pronounced as expected; whereas for soy beans and wheat the association was very weak.

The final investigation reveals that as reported by their parents, the HRQL of children with FHS is lower than that of both children with no allergic disease and children suffering from other allergic disorders. This impairment in HRQL was most pronounced for children with food-related symptoms originating from the airways. High levels of IgE antibodies to food were also associated with a reduced HRQL.

In conclusion, children demonstrating only a single symptom of FHS and/or no sensitization to food seem to recover from this disease. Increasing levels of IgE antibodies to milk, egg or fish are associated with an enhanced risk of having FHS elicited by these items of food, but this is not seen to the same extent particularly for soy bean, but also for wheat and peanuts. FHS leads to a negatively affected HRQL for both children and their families. This is especially true if the disease is pronounced or associated with high levels of IgE antibodies to food.

Key words: BAMSE, children, food hypersensitivity, food allergy, health-related quality of life, IgE antibodies, sensitization