Food allergy in infants assessed in two German birth cohorts 10 years after the EuroPrevall Study

Daniela Roehrl[1], Susanne Brandstetter[2], Linda Siziba[3], Dietrich Rothenbacher[4], Vincent Gaertner[1], Susanne Harner[1], Angela Köninger[1], Christian Apfelbacher[1], Michael Melter[2], Jon Genuneit[3], and Michael Kabesch[1]

[1]University of Regensburg
[2]Barmherzige Brüder gemeinnützige Krankenhaus GmbH
[3]Leipzig University
[4]Ulm University

May 27, 2021

Abstract

Background: The prevalence of food allergies (FA) in children increased rapidly at the turn of the century. The EuroPrevall study identified Germany as a country with very high prevalence of FA at that time. Using two large German birth cohorts we provide an update of the status quo ten years later. Methods: KUNO Kids and Ulm SPATZ Health studies are two ongoing prospective birth cohorts. Information on FA was obtained by questionnaires at birth and after 6, 12 and 24 months. Univariate logistic regression analyses were performed to investigate risk factors during pregnancy, birth and early childhood. Results: In 1139 and 1006 children from KUNO Kids and SPATZ the point prevalence of parent-reported FA symptoms at the ages of 1 and 2 years was 13.2% and 13.9 % in KUNO Kids. Doctor's diagnosed FA at 1 and 2 years was 2.4% and 2.7% in KUNO Kids and 2.3% and 3% in SPATZ. Cow's milk and citrus fruits were most frequently suspected by parents to cause FA symptoms. Atopy in the child was associated with a higher frequency of FA at any time, whereas atopy in first degree relatives was only associated with FA at year 1. Smoke exposure during pregnancy was a risk for FA at age 2. Conclusion: The prevalence of food allergy seems to have plateaued in the last 10 years in Germany. FA is often suspected by parents but only rarely diagnosed by oral food challenge. Risk factor analysis may help to establish personalized health approaches.

Hosted file

`Food_allergy_in_infants_assessed_in_two_German_birth_cohorts_title_page.docx` available at https://authorea.com/users/416008/articles/523747-food-allergy-in-infants-assessed-in-two-german-birth-cohorts-10-years-after-the-europrevall-study

Hosted file

`Food allergy_Main text.docx` available at https://authorea.com/users/416008/articles/523747-food-allergy-in-infants-assessed-in-two-german-birth-cohorts-10-years-after-the-europrevall-study

Hosted file

`Food allergy_References.docx` available at https://authorea.com/users/416008/articles/523747-food-allergy-in-infants-assessed-in-two-german-birth-cohorts-10-years-after-the-europrevall-study

Hosted file

Food allergy_Tables.docx available at https://authorea.com/users/416008/articles/523747-food-allergy-in-infants-assessed-in-two-german-birth-cohorts-10-years-after-the-europrevall-study

Hosted file

Food allergy_figure1.docx available at https://authorea.com/users/416008/articles/523747-food-allergy-in-infants-assessed-in-two-german-birth-cohorts-10-years-after-the-europrevall-study

Hosted file

Food allergy_figure2.docx available at https://authorea.com/users/416008/articles/523747-food-allergy-in-infants-assessed-in-two-german-birth-cohorts-10-years-after-the-europrevall-study

Hosted file

Food allergy_Figure3.docx available at https://authorea.com/users/416008/articles/523747-food-allergy-in-infants-assessed-in-two-german-birth-cohorts-10-years-after-the-europrevall-study