

EDITORIAL

Early life events influence asthma and food allergy, and how epitope binding can predict the outcome of oral immunotherapy

This issue of *Pediatric Allergy and Immunology* closes another year of publishing, serving research and education in our field. It is a good time to look back at the last months with a summary of the latest and most prominent publications in the three *European Academy of Allergy and Immunology* (EAACI) journals. The review article in *Clinical Translational Allergy* provides you with a summary of articles published in our journals related to skin allergy.¹ *Allergy* features a review on articles reporting on respiratory diseases,² and our journal summarizes the themes of food and drug allergy, as well as anaphylaxis.³ With this common initiative, we hope to give our readership and the members of EAACI a glance at the very vivid scientific life in our field.



Tabea Brick

Wheezing is a major health problem in young children, which may evolve later in asthma. The first study highlighted in this editorial reports from patients recruited through the PASTURE study, with other aspects we have been reporting earlier.^{4,5} Brick et al investigated first-year wheeze reports (by prospective diaries from 2 to 12 months of age and retrospective questionnaires at 12 months of age) and correlated them with determinants and the evolution at 6 years of age in relation to asthma and lung functions.⁶ Determinants of true-positive recall (in 54% of wheezing children) were parental asthma, total number of wheezing episodes, and a short time interval between completion of the one-year questionnaire and the last wheeze episode. True-positive recall could be correlated with a higher risk of developing asthma and diminished lung functions as compared to false-negative recall. Identifying predictors of asthma and allergies in the growing child is key for initiating preventive measures. A recent study has identified wheeze trajectories by phenotypes, after including individual and environmental risk factors.⁷ Similarly, environmental and personal factors have been studied in children with atopic dermatitis developing asthma.^{8,9} Early food sensitization is another well-known common factor increasing the risk for asthma and allergy development later in life.^{10,11}



Eimear Kelly

Early life events are definitely predicting later development of allergy, and the choice of feeding sources may play a key role. Kelly et al have investigated how formula feeding in the first days of life may influence later development of cow's milk allergy (CMA).¹² The effect of formula only, breast milk only, or breast milk with formula supplementation was correlated with a diagnosis of cow's milk allergy. Logistic regressions examined neonatal feeding and the likelihood of developing CMA. Formula supplementation was highly correlated with later development of CMA, while exclusively formula-fed infants had the same risk of developing CMA than exclusively breast-fed infants. This report strongly advocates refraining from unnecessary complementary formula supplementation early in life in breast-fed infants, in order to prevent later development of CMA. Indeed, current recommendations favor the early introduction of potentially allergenic foods, but these should be introduced early at weaning, and most possibly with regular feeds.¹³⁻¹⁶ How the maternal diet during pregnancy or lactation may influence allergy development still remains a topic of discussion and potential investigations.¹⁷ Also, the degree of allergenic protein hydrolyzation a developing immune system might be exposed to may matter greatly.¹⁸



Stephen Dreskin

Oral immunotherapy in food-allergic patients has proven to provide a real benefit leading to more safety with less reactions to low amounts of contaminating foods.¹⁹ Nevertheless, the procedure implies maximum adherence to a protocol stretching over a long time.²⁰ In this issue, Dreskin et al report on predictors of sustained unresponsiveness, by investigating sIgE to peanuts and the binding of IgE to epitopes of the major peanut allergen Ara h2. They were able to show that the eliciting dose in an open challenge to peanut protein was inversely associated with levels of sIgE to peanut or to Ara h2. Also, IgE binding to epitopes 1, 5, and 6 of Ara h2 was highly predictable of sustained unresponsiveness resulting from oral immunotherapy in this cohort of peanut-allergic patients.

Coming to the end of this second year of appointment of the current editorial team, I wish to thank all for their constant dedication to PAI, thriving to deliver the best for the readership. Jennifer Koplin will leave the team of Associate Editors, our warmest thanks to her for her committed work and a warm welcome to our incoming Associate Editor, Rachel Peters from the Murdoch Children's Research Institute in Melbourne, Australia. Last but not least, our warmest thanks go to our contributors and the reviewers whose work is essential for the quality of the Journal.

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