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Response to “The Atopic March”

Letter to the Editor of *Allergy*

We agree with Wüthrich and Schmid-Grendelmeier (1) that it is important to distinguish between eczema with and without sensitisation when considering the implications of allergic disease in infancy and the so-called atopic march. In our paper synthesising the evidence on the link between early allergic phenotypes and the subsequent comorbidity of asthma and allergic rhinitis (hay fever) (2) we were unable to study the atopic march stratified by sensitisation status, since no eligible study featuring twins or sibships reported measurements of skin prick test (SPT) wheal sizes or allergen-specific IgE levels alongside eczema status. One of the studies (3) included in our review did, however, show that it was necessary to stratify by allergic rhinitis status to establish an association between eczema and asthma, although we acknowledge that allergic rhinitis in childhood is unlikely to be a good proxy for sensitisation status in early life.

Further support for the hypothesis that sensitisation status in the presence of eczema confers different risks for subsequent allergic diseases is available from our published analyses of data from singleton children. In the Melbourne Atopy Cohort Study, the presence of eczema was prospectively documented until 2 years of age in a birth cohort of 620 infants with a family history of allergic disease. Sensitization status was determined by skin prick tests

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(SPTs) at 6, 12, and 24 months to cow's milk, egg white, peanut, house dust mite, rye grass and cat dander, and interviews were conducted at 6 and 7 years to determine the presence of asthma and allergic rhinitis. Within the first 2 years of life, 127 (28.7%) of the 443 children who could be classified had eczema with sensitisation, 91 (20.5%) had eczema without sensitisation, 84 (19.0%) did not have eczema but were sensitised and 141 (31.8%) did not have eczema and were not sensitised. We found that for children with eczema, those with sensitisation had a higher risk of asthma (Odds Ratio = 3.52, 95% Confidence Interval = 1.88 - 6.59) and allergic rhinitis (OR = 2.91, 95% CI = 1.48 - 5.71) than those without (4). The increased risk of asthma was even greater if the infant had a large SPT wheal size (OR = 4.61, 2.34 - 9.09) to any of the three foods on the allergen panel. Moreover, there was no strong evidence that children with eczema but without sensitisation had an increased risk of asthma or allergic rhinitis compared with asymptomatic children (4). A follow-up of the study concluded that, in children with a family history of allergic disease, eczema that commences in early infancy and persists into the toddler years is strongly associated with the risk of asthma, and to a lesser extent, the risk of allergic rhinitis (5).

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