Debate

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Reply: Breast-feeding and childhood eczema

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Björkstén and Lundbäck (1) raise the question of whether breast-feeding reduces the risk of allergic diseases and in particular eczema. In two recent meta-analyses, breast-feeding during the first months of life was associated with an approximately 30% reduced risk of asthma [odds ratio (OR) 0.70, 95% confidence interval (CI) 0.60–0.81] and eczema (OR 0.68, 95% CI 0.52–0.88), respectively (2, 3). For both outcomes, the risk reduction seemed to be more pronounced in children with heredity for allergy.

When studying the association between exposures and health outcome it is essential to avoid disease-related modification of exposure. This is a particular problem in studies of breast-feeding and allergy. Children may have their debut of allergic disease during the first year of life and in such cases the mother is likely to continue to breast-feed for a longer period than otherwise. There are two ways to avoid such bias; either with a Cox regression analysis where duration of breast-feeding is set to onset of disease, or by excluding those children where onset of disease has occurred during breast-feeding. However, if such bias is not controlled in the analysis the associations may be biased.

In the study by the present group (4), based on 4000 children followed from birth, children with early symptoms of eczema were excluded. This approach was chosen since, owing to the way in which data were collected, the exact age of the child when the eczema started was not known, and thus the person-time at risk, which is critical in Cox regression, could not be estimated. However, the author agrees that excluding children is a weakness and as a consequence these results cannot be generalized to the group of children with very early symptoms.

The association between exclusive breast-feeding and various phenotypes of eczema with all children and after exclusion of children with early symptoms is presented in Fig. 1. In the upper panel the analysis is performed with all children included and in the lower panel with children with early eczema during exclusive breast-feeding excluded ($n = 265$). From a statistical point of view, there is no significant difference between the association of breast-feeding and the three phenotypes of eczema whether children with an overlap of disease and exposure are excluded or not (Fig. 1).

Björkstén and Lundbäck point out that the increase in allergic diseases during the past few decades in Sweden is associated with an increase in breast-feeding duration, implying that breast-feeding cannot be a protective factor. We would never draw conclusions on causality based on ecological data and it is obvious that time trends in occurrence of allergy are explained by a complex pattern of interactions among several environmental and life-style factors, including both harmful and protective exposures.

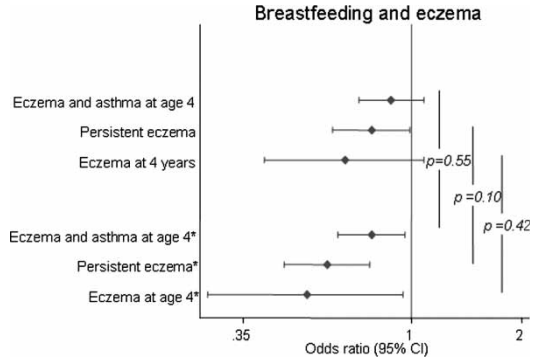

Fig. 1. Association between exclusive breast-feeding for at least 4 months and eczema during the first 4 years of life. *After exclusion of children with episodes of itchy rash during exclusive breast-feeding.

References

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