

Original Article:

Breastfeeding and risk of food allergy: A nationwide birth cohort in Japan

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NM designed the study, and wrote the initial draft of the manuscript. TY contributed to data collection, interpretation of data, and assisted in the preparation of the manuscript.

KN, MI, HT and HD contributed to interpretation, and critically reviewed the manuscript. All authors approved the final version of the manuscript, and agree to be accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved.

ABSTRACT

Background: Although breastfeeding has been well-established as the preferred method for infant nutrition, its prophylactic effects on food allergy remain controversial. Infantile eczema has been linked to food allergy via percutaneous sensitization; however, this relationship has not been considered in previous studies. We aimed to uncover the prophylactic effects of breastfeeding on food allergy, focusing on eczema-mediated percutaneous sensitization.

Methods: This retrospective cohort study was based on 46,616 children from the Longitudinal Survey of Newborns in the 21st Century in Japan, begun in 2001. We classified participants into three groups based on infant feeding practices (exclusive breastfeeding, partial breastfeeding including only colostrum, and formula feeding only) and used information from at least one outpatient visit for food allergy during two observation periods (age 6–18 months and age 6–66 months) as health outcomes. We performed log-binomial regression analysis adjusted for potential confounders and stratified analysis according to infantile eczema status.

Results: Compared with formula feeding, partial breastfeeding including only colostrum reduced the risk of food allergy only in children with infantile eczema, (RR=0.66, 95% CI: 0.46, 0.96 for age 6–66 months), whereas exclusive breastfeeding increased this risk in those without infantile eczema (RR=2.41, 95% CI: 1.40, 4.15, age 6–66 months). The prophylactic effects of breastfeeding on food allergy in the infantile eczema group increased with shorter breastfeeding duration.

Conclusions: Our results showed that breastfeeding, especially colostrum, had prophylactic effects on food allergy only among high-risk children with infantile eczema whereas prolonged breastfeeding increased the risk of food allergy.

Key words

Breastfeeding, Cohort, Colostrum, Eczema, Food allergy

Abbreviations:

RR, risk ratio; CI, confidence interval