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Titel des Beitrags:
FADS gene cluster modulates the effect of breastfeeding on asthma. Results from the GINIplus and LISAplus studies.

Abstract:
The protective effect of breastfeeding (BF) on the development of asthma has been widely recognized, even if not all results have been consistent. Gene variants of the FADS gene cluster have a major impact on fatty acid composition in blood and in breast milk. Therefore, we evaluated the influence of the FADS1 FADS2 gene cluster polymorphisms on the association between BF and asthma. The analysis was based on data (N=2245) from two German prospective birth cohort studies. Information on asthma and BF during the first 6 months was collected using questionnaires completed by the parents. Logistic regression modelling
was used to analyse the association between exclusive BF and ever having asthma stratified by genotype. In the stratified analyses, BF for 3 or 4 months after birth had a protective effect for heterozygous and homozygous carriers of the minor allele (adjusted odds ratio between 0.37 (95% CI: 0.18-0.80) and 0.42 (95% CI: 0.20-0.88). Interaction terms of BF with genotype were significant and ranged from -1.17 (P-value: 0.015) to -1.33 (0.0066). Moreover, heterozygous and homozygous carriers of the minor allele who were exclusively breastfed for 5 or 6 months after birth had a reduced risk of asthma [0.32 (0.18-0.57) to 0.47 (0.27-0.81)] in the stratified analyses. For individuals carrying the homozygous major allele, BF showed no significant effect on the development of asthma. The association between exclusive BF and asthma is modified by the genetic variants of FADS genotypes in children.