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Title: Breastfeeding and rhinoconjunctivitis: A cohort study

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Body: Aim It is postulated that breastfeeding (BF) reduces the risk of atopic diseases including rhinoconjunctivitis (RC) in children, but the available evidence is inconclusive. We examined the association between BF and reported hayfever (HF) and symptoms of RC in a large population-based cohort Method We assessed BF in children aged 1-4 years from Leicestershire, UK. We sent questionnaires at age 6-10 and again at 13-18 yrs, asking about recent (past 12 months) HF, symptoms of RC (runny nose and itchy/watery eyes) and severe RC (SRC, RC affecting activity). We ran logistic regressions separately for HF, RC and SRC, adjusting for age, sex, ethnicity, smoking in pregnancy, family history of atopy, early exposure to infections, socio-economic status and early signs of atopy (wheeze or eczema) Results Of 6768 participants with BF data at recruitment, 4236 and 2542 responded at age 6-10 and 13-18 years. 2732 (40%) were never breastfed. From age 6-10 to 13-18 there was an increase in prevalence of HF (14% to 36%), RC (12% to 22%) and SRC (3% to 5%). Adjusting for confounders, BF was associated with a reduced risk of HF at age 6-10 (OR 0.71 (95% CI 0.57-0.87)) but not at age 13-18 (0.97 (0.79-1.18)). For RC and SRC, no significant associations were found, with ORs of 0.96 (0.77-1.11) and 0.86 (0.56-1.31) at age 6-10, and 1.04 (0.83-1.30) and 1.08 (0.70-1.67) at age 13-18, respectively Conclusion Our study does not provide clear evidence for a protective effect of breastfeeding against development of allergic RC. The disparity between results for HF and symptoms of RC might reflect different underlying conditions (allergic versus not allergic) and requires further examination. Funding SNF 32003B-144068; SNF PDFMP3-123162; Asthma UK 07/048.