RESULTS. At 1 month of age, infantile eczema, seborrheic dermatitis, intertrigo, and diaper dermatitis were diagnosed in a total of 29, 7, 14, and 24 neonates, respectively. No associations (such as family history of allergic disease or mode of feeding) were found for the prevalence of these eruptions. Neonates with infantile eczema had a significantly higher number of eosinophils in the cord blood ($P < .0001$). In contrast, no such tendency was found for any other skin eruption. In neonates with infantile eczema at 1 month of age, the diagnosis of atopic dermatitis had been made significantly earlier, and the prevalence of wheezing illness was significantly higher compared with infants who did not have infantile eczema.

CONCLUSIONS. Infantile eczema, but not other skin eruptions, precedes the development of atopic dermatitis and wheezing illness during early infancy. This may be secondary to the activation of eosinophils before birth.

REVIEWER COMMENTS. Patients with infantile eczema are at increased risk for atopic disease. The measurement of cord blood eosinophils may aid in predicting which infants will develop infantile eczema and, in addition, may have diagnostic utility in predicting which patients are at risk for the development of further allergic disease.

Risk Factors for Atopic Dermatitis in New Zealand Children at 3.5 Years of Age


PURPOSE OF THE STUDY. To examine factors associated with a diagnosis of atopic dermatitis (AD) at 3.5 years of age, especially factors implicated by the hygiene hypothesis.

STUDY POPULATION. There were 871 children enrolled at birth for the Auckland Birthweight Collaborative study, 744 (85.4%) participated at 1 year, and 550 (63.2%) at 3.5 years. AD was diagnosed in 87 (15.8%) children at 3.5 years.

METHODS. The Auckland Birthweight Collaborative study is a case-control study of risk factors for small-for-gestational-age infants. Case subjects were born at term with birth weight at ≤10th percentile; controls were appropriate for gestational age, with birth weight >10th percentile. AD was defined as the presence of an itchy rash in the past 12 months with ≥3 of the following by history: flexural involvement, generally dry skin, atopic disease in parents or siblings, or visible flexural dermatitis by photographic protocol.

RESULTS. The prevalence of AD did not differ by birth weight. AD at 3.5 years was associated with raised serum immunoglobulin E, wheezing, asthma, rash, or eczema at 1 year. In multivariate analysis adjusting for parental atopy and breastfeeding, AD at 3.5 years was associated with atopic disease in the parents (maternal atopy only [adjusted odds ratio (aOR): 3.83; 95% confidence interval (CI): 1.2–12.2]; paternal atopy only [aOR: 3.6; 95% CI: 1.09–11.75]; both parents atopic [aOR: 6.12; 95% CI: 2.0–18.5]). There was a higher risk of AD with longer duration of breastfeeding (<6 months [aOR: 6.13; 95% CI: 1.5–25.9]; ≥6 months [aOR: 9.70; 95% CI: 2.5–38.2]) compared with never breastfeeding. AD at 3.5 years had a negative association with cat ownership (aOR: 0.5; 95% CI: 0.2–0.97) but was not associated with owning a dog at 3.5 years, having pets at 1 year, or with older siblings. AD at 3.5 years was not associated with gender, socioeconomic status, maternal smoking, parity, mold exposure, immunizations, BMI, or antibiotic use in the first year of life.

CONCLUSIONS. A personal and a parental history of atopic disease are risk factors for AD at 3.5 years. Duration of breastfeeding was associated with an increased risk of AD. No association was found with factors implicated by the hygiene hypothesis.

REVIEWER COMMENTS. This is one of many studies to look at various risk factors for atopy, here focusing on AD. Similar to other studies, the authors show that family history of atopy is a risk factor for AD. However, compared with other studies, the authors did not find any association with gender, socioeconomic status, environmental risks, or BMI. This discrepancy is probably attributable to differences in populations and different environmental factors. The data on atopy prevention by breastfeeding remain unclear and may be affected by reverse causation (breastfeeding longer in response to observing AD); although this is one of several negative studies, meta-analyses of multiple studies typically show a prevention effect.

BCG Immunization at Birth and Atopic Diseases in a Homogeneous Population of Spanish Schoolchildren


PURPOSE OF THE STUDY. To investigate the effect of vaccination with BCG on the development of atopic diseases in a homogeneous population of Spanish schoolchildren.
Risk Factors for Atopic Dermatitis in New Zealand Children at 3.5 Years of Age
Jonathan M. Spergel
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