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The effect of eczema, environmental and socio-demographic factors on the development of food allergy: A nested case-control study

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The prevalence of food allergy has increased substantially over the last decade. However, factors contributing to this increase are currently unknown. We aimed to determine the influence of the socio-demographic characteristics, lifestyle habits, and atopic factors on most common food allergies. We performed a cross-Canada, random telephone survey. Cases consisted of individuals with probable food allergy (i.e. self-report of convincing symptoms and/or physician diagnosis) to peanut, tree-nut, shellfish, fish, milk, egg, wheat, soy or sesame. Controls consisted of non-allergic individuals matched for age within the same household (when available) or non-allergic households. Cases and controls were queried on dietary habits during pregnancy, lactation and infancy, day-care attendance, vaccination, infections, pet ownership, living on a farm, and personal and family atopy. Multivariate logistic regressions were used to assess potential determinants. Between September 2010 and September 2011, 480 cases and 5,271 controls completed the questionnaire. For all 9 allergens, probable allergy was associated with maternal or sibling food allergies [odds ratio=OR, 2.9 (95%CI, 2.0, 4.4), 2.8(2.1, 3.8) respectively] as well as personal history of eczema, asthma, hay fever or other food allergies [2.4(1.9, 3.0), 2.3(1.8, 3.0), 2.1(1.6, 2.6) and 1.9(1.3, 2.8)]. High income (top 20%) was associated with higher odds [1.6(1.2, 2.0)] while recent adult immigrants (< 5 years) had lower odds [0.4(0.2, 1.0)].

Individual food allergies had similar associations with personal and family atopy and especially personal history of eczema in infancy [2.3(1.5, 3.4)]. Our results reveal that atopy especially eczema, socioeconomic status, education, and immigration are associated with probable food allergy

Biography

Ben-Shoshan graduated from The Sackler School of Medicine, Tel-Aviv, Israel and completed his fellowship in Pediatric Allergy/Clinical Immunology at Montreal Children's Hospital in 2009. Dr. Ben-Shoshan has been granted his M.Sc degree in Epidemiology in McGill in 2011. In 2011 he was granted the Emerging Clinician Scientist fellowship award by AllerGen NCE and in 2013 the FRSQ junior 1 salary award. Ben-Shoshan is currently a physician in the division of Allergy/Immunology at Montreal Children's Hospital and is involved in research initiatives on anaphylaxis, chronic urticaria and immunodeficiency and has more than 30 publications related to these topics.

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