



MEETING ABSTRACT

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Associations between second-hand smoke exposure in pregnancy and age of childhood asthma development

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From Canadian Society of Allergy and Clinical Immunology Annual Scientific Meeting 2012
Calgary, Canada. 11-14 October 2012

Background

Maternal smoking during pregnancy has been associated with an increased hazard of incident childhood asthma. We investigated the association between any second-hand smoke exposure in early life and childhood asthma development.

Methods

In the Toronto Child Health Evaluation Questionnaire, parents of 5619 grades 1-2 students reported age of physician-diagnosed asthma development, exposure to maternal and household second-hand smoke during pregnancy and the first year of life, socio-demographic factors, and other early-life exposures such as mold and cockroach. Using Cox proportional hazard models, we evaluated the longitudinal associations between second-hand smoke exposure and age of asthma development.

Results

Household second-hand smoke exposure prevalence was 8.3% during pregnancy and 10.6% in the first year of life; 15.5% of children developed asthma. After adjusting for sex, prematurity, being born in Canada and maternal asthma, children exposed to home second-hand smoke during pregnancy were more likely to develop asthma and developed asthma sooner [adjusted hazard ratio (HR) 1.36, 95% confidence interval (CI): 1.09, 1.70], even after excluding children whose mothers smoked in pregnancy (HR 1.53, 95% CI: 1.09, 2.14). The association strengthened (HR 1.88, 95% CI: 1.16, 3.02) after adjusting for home second-hand smoke exposure in the first year.

Conclusions

Home second-hand smoke exposure during pregnancy is associated with an increased hazard of childhood asthma development, even if the mother is not a smoker. Recommendations for smoking cessation during pregnancy should focus on pregnant women and members of their households.

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Published: 2 November 2012

doi:10.1186/1710-1492-8-S1-A4

Cite this article as: Simons *et al.*: Associations between second-hand smoke exposure in pregnancy and age of childhood asthma development. *Allergy, Asthma & Clinical Immunology* 2012 **8**(Suppl 1):A4.

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