



Wednesday, 22 September 2010

Estoril (Foyer Nexo) Session 501 10:45-12:45 12:00
OP Oral Presentation : Indoor exposures to irritant chemicals, allergens and moulds and respiratory health of children and adults

5587

The use of household cleaning sprays, asthma severity and asthma control in the EGEA study

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Introduction: Frequent use of cleaning sprays at home may be an important risk factor for adult-onset asthma. Domestic exposures may partly explain gender differences in the level of asthma control.

Aim: To study the association between the use of household cleaning sprays and asthma severity and asthma control, in women and men from the second survey of the Epidemiological study on the genetics and environment of asthma (EGEA).

Methods: Data were available for 1303 adults (52% women, 44 years, 50% never smokers) including 235 never asthmatics and 504 current asthmatics who were classified, according to GINA 2002 and 2004 guidelines, as more severe (44% and 56%, respectively) and as uncontrolled/partly controlled (58%, GINA 2006). Associations between reported use of domestic sprays and asthma, severity and control were evaluated using logistic regression analyses, stratified by gender and adjusted for age and smoking.

Results: Less men than women did home cleaning tasks (38% vs 77%) and used sprays (27% vs 49%) weekly ($p < 0.0001$). In women, significant associations were observed between weekly use of 2 sprays or more (vs no weekly use) and current asthma (Odds Ratio (OR) [95% Incidence interval]=1.7[1.1-2.5]). OR were higher when considering more severe asthma (1.9[1.2-3.2] and 2.0[1.2-3.2] for both definitions) and uncontrolled/partly controlled asthma (2.0[1.2-3.2]). In men, no associations were observed.

Conclusions: Our results suggest a deleterious role of common use of cleaning sprays at home on asthma severity and asthma control in women. This is consistent with the hypothesis that home exposures may partly explain gender differences in uncontrolled asthma.

Grants: AFSSET EST-09-15