Smoking Initiation in Asthmatics and Impact of Smoking on Asthma Incidence in the EGEA Cohort.

V. Siroux, PhD¹, L. Vignoud, PhD¹, A. Boudier, MSc¹, M. Nguile Makao, MSc¹, J. N. Massala Mouele, MSc¹, N. Le Moual, PhD², R. Nadif, PhD², C. Pison, MD, F. Kauffmann, MD and I. Pin, MD. Email: valerie.siroux@ujf-grenoble.fr

¹INSERM U823, Grenoble, France; ²INSERM U780, Villejuif, France and ³CHU, Grenoble, France.

The aims were to assess longitudinally 1) the role of asthma as a potential selection factor for smoking initiation and 2) the role of smoking as a potential risk factor for asthma incidence in relatives of asthmatics.

The analyses were conducted in the EGEA study, a 12-year follow-up of asthmatic cases, their first degree relatives and controls (n=1848). The first question was addressed in 511 non smoker children at inclusion (258 asthmatics, 253 non asthmatics). The second question was addressed in 496 adult relatives of cases, non asthmatic at inclusion. Survival analyses (Cox model) were conducted with adjustment on confounders (age, sex, ETS, father educational level, centre for question 1, and sex, age, educational level, atopy, rhinitis for question 2) and stratification for age.

Children with asthma at inclusion started smoking as often as non asthmatic children (45.4% vs 48.6% respectively, RR[IC 95%] = 1.0 [0.7;1.3]).

Among adult relatives of cases, 37 had incident asthma at follow-up (7.5%). Both smoking at inclusion (non smoker n=242, ex-smoker n=124, smoker n=130) and a time dependent smoking variable were used (never n=341, beginner (n=22), persistent (n=74), former (n=55)). Smoking at inclusion did not affect asthma incidence (RR for smokers and ex-smokers compared to non smokers were 1.8 [0.8;3.9] and 0.7 [0.3;2.1] respectively). However, compared to never smokers, the risk for asthma incidence was increased in beginner and persistent smokers (RR=3.2 [1.0;10.1] and 2.5 [1.0;5.9]).

Asthmatics started smoking as often as non asthmatics. This analysis indicates that smoking may be a risk factor for asthma incidence in first degree relatives of asthmatics, a potentially more sensitive population.

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