

# Sensitization to Inhalant Allergens in Schoolchildren with Special Reference to Passive Smoking

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Dear Editors

Yamazaki et al. [1] conducted a cross-sectional study to determine the factors associated with sensitization to inhalant allergens in schoolchildren. The adjusted odds ratios (AORs) of some of the respiratory symptoms in children and their parents for the sensitization were significantly increased. In contrast, the AORs of maternal passive smoking for sensitization were significantly lower in children, especially boys. I have some concerns about their study, with special reference to smoking.

First, Saulyte et al. [2] conducted a systematic review and meta-analysis on the association between smoking exposure and several allergic conditions in adults and children. Their study showed a high degree of heterogeneity, but the authors summarized that exposure to passive smoking was significantly associated with an increased risk for allergic diseases and food allergy in children and adolescents. Although there is heterogeneity in their meta-analysis, a positive association between passive smoking

and allergic condition exists in current epidemiological studies.

Relating to the risk assessment of smoking in adults, Nagata et al. [3] examined the inverse relationship between active smoking and the risk of cedar pollinosis in a population-based cohort study, showing a 36% risk reduction in men and women, respectively. They also recognized a significant dose-response relationship between the amount of smoking and the risk reduction of cedar pollinosis. Alexandropoulos et al. [4] also described the related factor of allergic rhinitis, and the AOR (95% confidence interval) of smoking for allergic rhinitis was 0.71 (0.55–0.91). These studies present a significant inverse relationship between active smoking and pollinosis. As one of the speculations, the hygiene hypothesis should be considered for the association via different socioeconomic status including passive and active smoking [5, 6].

Second, there is a follow-up study to know the effect of pollinosis on all-cause

and cause-specific mortality [7]. After adjusting for potential confounders, the hazard ratio (95% confidence interval) of pollinosis for all-cause and neoplasms mortalities was 0.57 (0.38–0.87) and 0.48 (0.26–0.92), respectively. Iwasaki et al. [8] reported that age-adjusted hazard ratios of current and former smoking for all-cause mortality became significant in rural inhabitants, and the recent meta-analysis also confirmed the adverse effect of smoking on mortality [9]. The inverse association between pollinosis and mortality should be considered with special reference to smoking information.

By reviewing studies in Japan, protective effects of passive or active smoking in children or adults for allergic conditions have been reported. Yamazaki et al. [1] presented risk and protective factors for sensitization to inhalant allergens in children by the method of serological epidemiology. As sex and age are both important factors for this association, further study is needed.

## References

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