

Association between asthma and obesity in adults

Ahn Hyun-Cheol, Nam Hae-Sun, Park Joon-Soo, Kim Jin-Gook, Lee Sang-Han,
Kim Do-Jin, Park Choon-Sik, Hwang Kyu-Yoon*

*Department of Preventive Medicine and Genome Research Center of Respiratory
Disease and Asthma, Soonchunhyang University*

Both bronchial asthma and obesity are worldwidedly chronic health problems. Obesity is more likely associated with asthma in children and young adults. Until now little information is known on relation between asthma and obesity in adults. This study was designed to evaluate the relation of body mass index (BMI) with asthma in adults. During March - October 2001, 2,504 subjects, aged 20 - 79 years, were enrolled in a Health Promotion Center, Soonchunhyang University Bucheon Hospital. A standardized questionnaire was used to collect asthma related symptoms, past and family history of allergy. Overweight and obesity were defined as BMI of 25 - 29.9 kg/m² and ≥ 30 kg/m², respectively. Associations were expressed as odds ratios and interaction between covariates were assessed by multiple logistic regressions. Prevalences of asthma, overweight, and obesity were 32.9%, 28%, and 2.3%, respectively. Asthma was significantly related to aged 50 - 59 years, cigarette smoker ($p < 0.01$), family history ($p < 0.01$), and obese subject ($p < 0.01$). After adjusting for possible confounders, BMI was remained the significant predictor of asthma (OR = 1.33, 95% CI= 1.10 - 1.61 for BMI of 25 - 29.9 kg/m² and OR= 2.43, 95% CI= 1.43 -4.15 for BMI ≥ 30 kg/m²). No significant effect modification by gender was observed. Our results suggested that increasing BMI is associated with predicting prevalence of asthma and thus, obesity is a potential risk factor of asthma in Korean adults. [The study was supported by the Korea Health 21 R&D Project(01-PJ3-PG6-01GN04-0003).]

Keywords : asthma, obesity, body mass index