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Association of age at menarche with metabolic syndrome and components of metabolic syndrome in premenopausal women, Korea National Health and Nutrition Examination Survey VI

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A combination of genetic and environmental factors determines age of menarche. In Korea, there has been a trend for a younger age of menarche as the country has undergone industrialization and adopted a westernized diet. Previous studies have indicated that the incidence of obesity and metabolic syndrome, as well as cardiovascular mortality is higher in women who undergo menarche at a younger age. This study was conducted to examine the relationship between age of menarche and metabolic syndrome in premenopausal women in Korea. Data for 1464 women were collected from the Sixth Korea National Health and Nutrition Examination Survey (KNHANES VI). The modified NCEP-ATP III criteria were used to define metabolic syndrome. Considering the unit of data extraction (investigation district), stratification variables and weighted value, a complex sample design extraction method was applied for statistical analysis. After dividing the subjects by age of menarche, the risk of metabolic syndrome was assessed using multiple logistic regression analysis adjusting for age, smoking, drinking, exercise, education level, household income and marital status. When the subjects were grouped by age of menarche (<12, 12-13, 14-15 and >16 years), a statistically significant increase in the average age of the group was observed (23.8±0.8, 29.6±0.4, 35.8±0.4 and 39.8±0.7, respectively; $p<0.001$). The adjusted odds ratio (95 % CI) for metabolic syndrome was 3.84 (1.52-9.70) in women who reached menarche at <12 years compared to those who reached menarche at >16 years. Age of menarche is associated with the risk of metabolic syndrome in premenopausal women in Korea.

Biography

Yoon Jeong Cho has her expertise in evaluation and passion in improving the obesity and metabolic diseases. Her open and contextual evaluation model based on responsive constructivists creates new pathways for improving healthcare. She has studied this section during several years of experience in research, evaluation, teaching and administration both in hospital and education institutions.

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