

THE RELATIONSHIP BETWEEN OBESITY AND LOWER COGNITIVE FUNCTION IN KOREAN HEALTH CHECKUP EXAMINEES

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Objective: This study was conducted to evaluate the effects of obesity on cognitive function in different age groups and to examine the relationship between cognitive function and radiological variables including visceral adipose tissue (VAT) and subcutaneous adipose tissue (SAT). **Materials and Methods:** Of the subjects aged ≥ 60 years who participated in a health screening program at the health promotion center of our hospital from February 1 through 21 in 2009, this cross-sectional study included a total of 250 subjects who underwent anthropometric measurement, hematochemical tests, abdominal computerized tomography and Mini-Mental State Examination in the Korean Version of CERAD (MMSE-KC). Lower cognitive function was defined as a MMSE-KC score of ≤ 1 standard deviation (SD). VAT and SAT were measured on abdominal CT images. **Results:** Cognitive function was significantly lower in subjects with obesity than those without (OR, 2.21; 95% CI, 1.23-3.99; $p=0.008$). Cognitive function was significantly lower in those with obesity after adjustment for age and educational level (OR, 2.72; 95% CI, 1.29-5.75; $p=0.009$). For the subjects aged 60-69 years, cognitive function was significantly lower in subjects with obesity (OR, 2.44; 95% CI, 1.19-5.01; $p=0.013$), whereas for the subjects aged ≤ 70 years, cognitive function was not significantly different between subjects with obesity and those without. Cognitive function correlated significantly with SAT (the lowest quartile vs. the highest quartile: OR, 2.51; 95% CI, 1.12-5.65; $p=0.026$). **Conclusion:** The results of this study support those of previous studies that obesity significantly correlates with cognitive function according to age. In addition, this study has clinical implications because it investigated the relationship between VAT and SAT measured on CT scans. Further studies are needed to determine whether obesity is a significant risk factor for dementia and to elucidate the mechanisms.