MAJOR FACTORS ATTRIBUTING TO PROGRESSION OF ALZHEIMER’S DISEASE IN KOREA; EPIDEMIOLOGIC & BIOLOGICAL MARKER STUDY

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Background & objectives: The objectives of this study were to analyze the socioeconomic and biological factors attributing to disease progression in Alzheimer's disease (AD) and to evaluate whether these factors have different aspects from those of other social background.

Methods: One hundred ninety clinical probable AD were enrolled. All participants in this study completed the basic information form of social background and previous medical health information and did follow up neuropsychological assessment annually. Socioeconomic factors were analyzed to affect the disease progression in AD. Brain MRI was done at interval of 1 year. Laboratory analyses included Apolipoprotein E (Apo E) and MTHFR genotype for evaluating unmodifiable factors for progression of AD. Multiple regression analysis were done for imaging analyses under voxel based morphometry(VBM) using statistical parametric mapping(SPM).

Results: Some epidemiologic factors such as were significantly correlated with symptomatic progression of AD (odds ratio (OR) of religion: 2.85, marital status 1.77, smoking 1.13, exercise 2.70, respectively). However, sex and education did not affect progression of AD. In aspects of biological markers, Apo E genotype was correlated with disease progression (OR: 2.4), but MTHFR was not. Gray matter volume loss according to Apo E ε4 burden were observed in bilateral parietal (Lt>Rt), right prefrontal and left temporal area for 1 year.

Conclusions: The result of biological factors analyses were similar to results reported previously. Epidemiological factors affecting progression of AD in Korea might have different faces compared to risk factors of progression in western culture. Cultural differences would be considered in research for dementia.