The Study of Cognitive Function in Elderly

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ABSTRACT

The study of cognitive decline and mental status in elderly person showed that age, head trauma and stroke were the risk factors for dementia and mild cognitive impairment (MCI). We found that normal subjects had often habits of physical exercise while dementia person lacked physical exercise. In our survey of declined cognition in elderly we found that almost all dementia patient had stroke. Ninety-seven valid MCI cases were followed up, and about 29.9% becoming to dementia (probable Alzheimer ’ s disease) in third year. This was similar to Dr. Peterson ’ s predication that 12.37% of MCI deteriorated to dementia (AD) every year. 14.43% of patient with MCI developed to depression, and 9.23% recover to normal status, and around 46.3% remained in MCI status. ApoE4 allele is a known risk factor of cognitive regression to MCI and dementia. We found that ApoE4 allele in the depression and normal groups was smaller than in the dementia group with a odds ratio (OR)=5.74 and in the MCI group OR=5.5. The serum level of high-density lipoprotein cholesterol (HDL-C) was lower in the dementia group than in the MCI and normal groups. This suggests that the presence of ApoE4 allele combine with a low serum level of HDL-C could be the risk factors for Alzheimer ’ s disease. Therefore, the prevention and treatment of dementia or others cognitive decline could be done by very earlier AD-8 dementia screening. In study of UBQLN1 (Ubiquilin 1) gene polymorphism (UBQ-8i), all 187 subjects were AA-type gene without G allele. Therefore, we concluded that this gene mutation in Taiwan was rare and the single nucleotide polymorphism (SNP) of UBQ-8i was not compatible with Hardy-Weinberg law. Since all UBQLN1 gene of rs12344615 site were AA-type allele, we suspected that there was a ethnic genetic difference between Taiwanese and Caucasians in UBQLN1 gene of UBQ-8i site. In intervention study of MCI with Art therapy, the mean age of the experimental and control groups were 82.83±3.703 and 82.89±3.367 respectively, P=0.956. After 16 weeks of intervention with visual expression art therapy, participants from the experimental group improved their cognitive function significantly, P=0.009, especially with the language function P=0.001.

Keywords : Cognitive decline、Mild cognitive impairment / MCI、ApoE4、Alzheimer's Disease / AD、Art therapy、Dementia 、Ubiquilin 1

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