



ABSTRACT

Correlation Between Hair Zinc Level and Cognitive Function in Elderly

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Background: Neurodegenerative disease is the most problem in elderly. Amyloid β ($A\beta$) accumulation is the major cause of cognitive impairment. Zinc has an important role in antioxidant and $A\beta$ accumulation process.

Objectives: This study aimed to evaluate the correlation between hair zinc level and cognitive function in elderly.

Methods: A cross sectional study was conducted involving 58 subjects of elderly in Jakarta. Subjects were recruited by consecutive sampling. Hair zinc level was measured by inductively coupled plasma emission spectrometer (ICPS) and cognitive function assessed by abbreviated mental test (AMT). Data analysis was done by spearman rank correlation test and p-value less than 0.05 was considered statistically significant.

Results: The mean of age was 65.4 ± 4.4 years old and 56.9% of subjects were female. The mean of hair zinc level was 123.23 ± 69.71 $\mu\text{g}/\text{gram}$ hair and 32.8% subjects had hair zinc deficiency. There was 91.4% subjects had normal cognitive function. The study showed no correlation between hair zinc level and cognitive function in elderly ($p=0.871$; $r=-0.022$).

Conclusion: There was no correlation between hair zinc level and cognitive function in elderly. Further research is expected to be performed with different level of cognitive function.

Keywords: hair zinc level, cognitive, elderly

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