PLASMA LEVELS OF VITAMIN B_{12}, EPIDERMAL GROWTH FACTOR AND TUMOR NECROSIS FACTOR ALPHA IN PATIENTS WITH ALZHEIMER DEMENTIA

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Objective: It was previously reported that vitamin B_{12} (Vit $B_{12)}$ has the regulatory effects on epidermal growth factor (EGF) and tumor necrosis factor alpha (TNF-α). The role of Vit B_{12}, EGF and TNF-α in the pathogenesis of Alzheimer dementia has not been elucidated yet. In this study the plasma Vit B_{12}, EGF and TNF-α levels were examined in individuals, between 65-99 years old with and without Alzheimer dementia.
Subjects and Methods: The study group comprised 47 patients with Alzheimer dementia and 38 cases without dementia. EGF and TNF- α were analyzed by ELISA, and Vit B_{12} was analyzed by chemiluminescence method.
Results: Vit B_{12} and EGF levels were significantly lower (p0.0001), where as TNF-α levels were significantly higher (p0.0001) in the Alzheimer dementia group in comparison to those without dementia.
Conclusion: This study is the first in examining EGF, VitB_{12} and TNF- α concurrently in patients with Alzheimer dementia. Our results show that the levels of Vit B_{12}, EGF and TNF-α in patients with and without Alzheimer dementia differ, hence further studies about these cytokines are required to investigate their roles in the pathophysiology of Alzheimer dementia.