THE RELATIONSHIP BETWEEN INFLAMMATORY MARKERS AND COGNITIVE IMPAIRMENT IN ACUTE ISCHEMIC STROKE PATIENTS

Abstract

Background: Patients with acute ischemic stroke are at a higher risk of developing cognitive impairment .Cognitive impairment is often associated with cytokine activation. **Aim of the work**: to assess the pattern of cognitive impairment in patients with acute ischemic stroke and to explore its relationship to the inflammatory markers **Patients and Methods:** Fourty four patients with acute ischemic stroke(1^{st} 48 hours) were subjected to neurological examination ,assessment of stroke disability using National Institute of Health Stroke Scale (NIHSS) and modified Rankin Scale (mRS),neuropsychological assessment using mini mental state examination (MMSE) , Montreal Cognitive Assessment (MoCA) scale , trail making test-B(TMT-B), and Controlled Oral Word Association Test (COWAT), measurement of(IL-8, ESR ,CRP) levels and neuroimaging. Fourty four ages, sex and educational level matched controls were included for comparison of neuropsychological tests and serum level of IL-8**.Results:** The patients showed worse performance in neuropsychological tests(MMSE ,MoCA ,COWAT ,TMT-B) than controls .The level of IL-8 was --significantly higher in all patients than the control subjects. There was a significant negative correlation between the serum level of IL-8 and both screening (MoCA) and detailed (COWAT) cognitive assessment. Significant negative correlation was found between the IL-8 serum level and TMT-B. **Conclusion:** The cognitive impairment in early acute ischemic stroke is highly correlated to the serum level of IL-8.

Key words: Acute ischemic stroke, cognitive impairment, IL-8.