

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

Thesis

Submitted for partial fulfillment of Master degree in
Neuropsychiatry

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2017

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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:** Forty four patients with acute ischemic stroke (1st 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. Forty 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.