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Poster Presentation

The Relationship between Serum Substance P Level and the Type as well as Prognostic Factors in Patients with Stroke

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Abstract

Stroke is the world's largest neurological defect caused by the disruption of brain blood circulation. Apart from death, the severest damage caused by stroke, a plethora of other mental and physical disabilities can ensue the incidence of a stroke. As a result of the continued disruption of blood circulation triggered by a stroke, biochemical and physiological mechanisms affect nerve cells and cause secondary damages. One of the most diverse mechanisms of secondary damages leading to cell damage or death is the release of tachykinins including substance P (SP). The release of tachykinins such as SP provokes inflammatory responses like blood flow interruption and increased vascular permeability in brain. Considering the delay in the emergence of secondary damages, pharmacological interventions can offer an opportunity to reduce cell damage and death. In this study, serum SP levels have been measured in ischemic and hemorrhagic strokes and it was analyzed in terms of clinical variables such as type of lesion, lesion size, gaze and NIHSS. In this study, 75 persons (18 patients with a diagnosed ischemic stroke, 23 hemorrhagic patients and 34 healthy subjects as the control group) were studied. After examining, the clinical variables such as stroke size, NIHSS, gaze, hemiplegia type and degree of consciousness were recorded for each patient. Then, the serum SP level was measured by ELISA and the results were analyzed by SPSS. Serum SP levels were significantly higher in patients compared to healthy groups ($p=0.001$), but this difference was not statistically significant between hemorrhagic and ischemic patients. Similarly, prognostic factors and serum SP level were not significantly correlated ($p=0.775$). Serum SP level increased in stroke patients. Moreover, the results show that the type of lesion was not related to the SP level.

Keywords: Stroke, Serum Substance P Level, Prognostic Factors

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