

Relationship between c-reactive protein as a prognostic factor and recurrent ischemic and hemorrhagic strokes

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Abstract:

Background and purpose: Stroke is the most common neurological disease. This study aimed to investigate the relationship between serum C-reactive protein (CRP) as a prognostic factor and ischemic and hemorrhagic cerebrovascular accident (CVA).

Materials and methods: This cohort study was performed in patients over 18 years of age with symptoms of ischemic and hemorrhagic CVA attending the emergency department in Mashhad Ghaem Hospital during the first 6 hours of the onset of symptoms. CRP levels and prognosis of serum CRP levels were determined in diagnosing the severity of ischemic and hemorrhagic lesions in CVA patients. The severity of CVA was determined based on MRS and NIHSS scales. Patients' follow-up was considered 6 months later.

Results: There were no significant differences between gender and age in study groups ($P > 0.05$). The median scores for MRS and NIHSS were significantly higher in hemorrhagic patients than ischemic patients. Analysis of CRP level in univariate regression model showed that CRP level is a bad prognosis for stroke ($\beta = 0.149$, $P = 0.027$). Mean age, gender distribution, type of stroke, symptoms, and underlying diseases were not significantly different between the group with and without stroke ($P > 0.05$). There were significant differences in CRP level and recurrence of stroke after 6 months between the groups studied ($P = 0.009$).

Conclusion: Monitoring of CRP levels can be effective in early diagnosis and control of recurrent stroke.

Keywords: ischemic stroke, hemorrhagic stroke, C-reactive protein