

Serum Nesfatin-1 Levels: A Potential New Biomarker In Patients with Subarachnoid Hemorrhage

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Introduction

Acute subarachnoid hemorrhage (SAH) is a neurological emergency with significant potential for long-term morbidity and mortality and novel therapeutic factors targeting diagnosis mechanisms during acute subarachnoid hemorrhage, is highly wanted. So this study aimed to determine nesfatin-1 levels in patients with SAH, could be used as a marker for the severity and prognosis.

Methods

Forty-eight consecutive admitted to the emergency service of our hospital and hospitalized at our clinic with the diagnosis of aneurysmal SAH between 2011 and 2013 were included in the study and followed up for six months for outcome. The control group consisted of 48 healthy individuals of similar age and gender.

Results

During the 6-month follow up, 7 of 48 patients died, and 16 (33.3%) patients had poor the Glasgow Outcome Score (GOS) scores. In the study group, the mean nesfatin-1 level was significantly higher than control group (7.36±2.5 and 4.29 ± 2.02 respectively; p<0.01). The mean nesfatin-1 level was 11.58±0.87 in the non-survival group and 6.64±1.89 in the survival group. Furthermore, it was 10.22±1.42 in patients with poor outcome in terms of GOS, and 5.93±1.46 in those with good outcome. The nesfatin-1 levels significantly increased with worsening of GOS, the World Federation of Neurological Surgeons (WFNS) grading system (Figure-1), and Fisher scores (Figure-2) and increasing plasma C-reactive protein levels (Figure-3) (p<0.01 for all).

Conclusions

The present study is the first to determine the prognostic value of serum nesfatin-1 levels in assessing SAH in humans. So levels of nesfatin-1 can be diagnostic and/or prognostic factor for SAH.

Learning Objectives

By the conclusion of this session, participants should be able to describe the importance of Nesfatin-1 Levels in the subarachnoid hemorrhage.

References

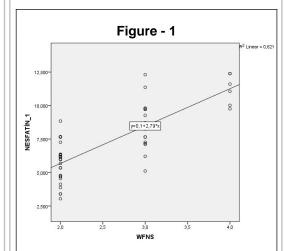
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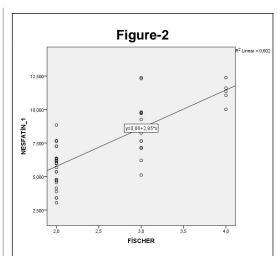
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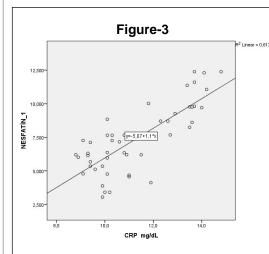
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The correlation curve showing the relation between plasma nesfatin-1 and WFNS score.



The correlation curve showing the relation between plasma nesfatin-1 and fisher score



The correlation curve showing the relation between plasma nesfatin-1 levels and systemic inflamation marker CRP.