Reviewer's report

Title: Pathogenic Role and Prognostic Value of Selected Cerebrospinal Fluid Acute Phase Factors for Clinical Course and Outcome of Ischemic Stroke

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Reviewer: Juergen Eggers

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The authors investigated the value of selected factors that can be found in the CSF of patients with acute stroke.

For this purpose, they included 95 consecutive patients admitted with acute stroke and a control group without cerebrovascular disease.

Beside some limitations, the main message of this scientific work is the correlation of CSF IL-6 and the clinical course and outcome.

Major compulsory revisions:

Methods:

The authors should present data about the type of strokes included. They report that stroke classification was done following the TOAST criteria; however, they do not present data about the results of classifying the included strokes. This could be relevant for the level of the factors measured in the CSF, because it may be important whether a stroke took place in the cortex or subcortical areas without direct neighborhood to the CSF.

The authors should give an idea how the patients were selected for the study: exclusion of infratentorial or lacunar strokes? I guess, space-occupying strokes were excluded (increased cerebral pressure as contraindication lumbal puncture).

Psychological stress: is this a proven risk factor for stroke?

“Therapy was directed toward correction of central and cerebral hemodynamics, hemorrhheological indexes and against cerebral edema”. Does this mean the patients received conservative best medical treatment as aspirin etc? Did they receive antibiotic or medical treatment of fever, increased body temperature?

The medical records were evaluated, however, no baseline criteria of the patients beside age and gender are given: Blood pressure, serum glucose, cigarette smoking, atrial fibrillation etc could be from interest when comparing group 1 and 2 (NIHSS < or >= 15)

“Patients were divided in two groups: Group I included patients with NIHSS #15, and Group II included patients with NIHSS <15. “

Is there any evidence-based reason to choose this cut-off value?
Minor Essential Revisions:

Title: In my opinion, there is no investigation of the pathogenic role of the CSF factors, so I would propose to change the title to something like “Selected acute phase CSF factors in ischemic stroke: findings and prognostic value”.

Abstract: Style of Background and methods: The sentences should be written out. The fact that only ischemic strokes were investigated should be clearly named.

“Functional outcome was evaluated by Barthel Index (BI).” At which time from stroke onset the functional state was measured? At 1 month after stroke, as it is presented in the conclusion section? The time the BI was measured should be named in the Methods. The author should give an explanation why they did not use the mRS as it is more reliable than BI in stroke studies.

Further comment:
I congratulate to the strict measurement of the CSF factors at defined time points.
I congratulate also to the fact that the ethic committee agreed to the lumbal puncture of the patients from the control group.

Level of interest: An article of importance in its field

Quality of written English: Needs some language corrections before being published

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.