Reviewer’s report

Title: Admission C - reactive protein after Acute Ischemic Stroke is associated with Stroke Severity and Mortality: The Bergen Stroke Study.

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Reviewer: Tunde T Magyar

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Comments to the authors

The objective of the manuscript “Admission C - reactive protein after acute ischemic stroke is associated with stroke severity and mortality: The Bergen Stroke Study” was to investigate the association CRP level measured within 24 hours after stroke onset AND stroke mortality, future cardiovascular events, and functional outcome.

Authors investigated 498 patients with ischemic stroke. CRP and NIHSS were measured at the time of admission. Short-term functional outcome was measured by mRS and Barthel index, 7 days after admission. The follow up was 2.5 years, long term mortality and future cardiovascular events were observed. They found independent relation between CRP and NIHSS, and between CRP and long term mortality. High CRP was not associated with short term functional outcome after adjusting for confounding factors.

My comments are:

1. There is a tendency to overinterpretation of the results in “Abstract” in “Conclusion” part, when authors wrote that “admission CRP is associated with short term functional outcome”. This sentence contradicts the “Results”, where “High CRP was not associated with short term functional outcome after adjusting for confounding factors”. It should be discussed more circumspectly.

2. In “Background” part there is a typing error: in JUPITER trial not rovustatin effect, but rosuvastatin effect was examined.

3. Methods:

What do authors mean “pre-existing illnesses”? Hypertension, diabetes mellitus, smoking habit and previous CV disease, what they used for statistical analysis, or did they consider the other factors what may have influence on CRP level? How did authors work with the patients with infections, malignancies, autoimmune diseases, surgery in recent past, generalized atherosclerosis, or lipid lowering therapy etc.? Exclusion criteria should be redefined.

4.
Results:
Table 3 and 4 were the same tables, what I could download. I did not find OR, HR, Beta, * and ** on Table 3, what authors denoted on Table 3 legends. The article – tables - should be compiled more precisely.

5. Discussion:
TOAST criteria, stroke etiology, Table 3. Most part of stroke etiology is unknown based on Table 3, only in high CRP level group was the highest part of the cardioembolic origin. It should be discussed more circumspectly.

Authors wrote in Methods, that acute vascular events were collected from the hospital registry, and mortality was collected from the National Population Registry of Norway. They don’t know the reason of death of the patients. Is there any data about the hospitalization rate of the acute cardiovascular events from this area? I mean, is it possible that patients did not admit to the hospital because of the second acute cardiovascular event, or the most part of the stroke patients died because of other reasons (pneumonia, pulmonary embolism, malignancy)?

**Level of interest:** An article whose findings are important to those with closely related research interests

**Quality of written English:** Acceptable

**Statistical review:** Yes, but I do not feel adequately qualified to assess the statistics.

**Declaration of competing interests:**
'I declare that I have no competing interests'