Reviewer’s report

Title: Relation between carotid vulnerable plaques and peripheral leukocyte: A case-control study of comparison utilizing multi-parametric CEUS

Version: 0 Date: 21 Jul 2019

Reviewer: Evren Ustuner

Reviewer's report:

The study explores the intraplaque neovascularity (IPN) and inflammatory status of the carotid plaques using contrast enhanced ultrasound parameters and peripheral leucocyte counts. The main findings in the study are that vascular and inflamed plaques are more prone to embolism and their vascularity can be measured by contrast enhanced ultrasound and threshold parameters can be established. The study is a case controlled study but a prospective design would have suited better and would have made the study flawless.

-In the conclusion section of the abstract, the findings related to leukocytes (Relationship between IPN and peripheral leukocyte count and CEUS should be worded better.

- "45 plaques were measured in the external carotid artery (ECA)" , It is generally accepted that plaques in the ECA system are not related to cerebrovascular events and they are of superfluous importance with respect to cerebral circulation since they are are considered not to embolize into the intracranial system. It would be better if these plaques were not measured and included in the study.

- page 10 line 17. "An obvious plaque was successfully selected to perform CEUS". This plaque selection criteria must be stated in detail because selection criteria (especially anatomical location) is relevant to acute cerebral infarction risk (ACI).

- The reasons that cause decreased lymphocyte count and increased ACI risk need to be described better.

Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Yes
Are the conclusions drawn adequately supported by the data shown?  
If not, please explain in your comments to the authors.

Yes

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?  
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

I am able to assess the statistics

Quality of written English  
Please indicate the quality of language in the manuscript:

Needs some language corrections before being published

Declaration of competing interests  
Please complete a declaration of competing interests, considering the following questions:

1. Have you in the past five years received reimbursements, fees, funding, or salary from an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

2. Do you hold any stocks or shares in an organisation that may in any way gain or lose financially from the publication of this manuscript, either now or in the future?

3. Do you hold or are you currently applying for any patents relating to the content of the manuscript?

4. Have you received reimbursements, fees, funding, or salary from an organization that holds or has applied for patents relating to the content of the manuscript?

5. Do you have any other financial competing interests?

6. Do you have any non-financial competing interests in relation to this paper?

If you can answer no to all of the above, write 'I declare that I have no competing interests' below. If your reply is yes to any, please give details below.

I declare that I have no competing interests

I agree to the open peer review policy of the journal. I understand that my name will be included on my report to the authors and, if the manuscript is accepted for publication, my named report including any attachments I upload will be posted on the website along with the authors' responses. I agree for my report to be made available under an Open Access Creative Commons
CC-BY license (http://creativecommons.org/licenses/by/4.0/). I understand that any comments which I do not wish to be included in my named report can be included as confidential comments to the editors, which will not be published.

I agree to the open peer review policy of the journal