Reviewer’s report

Title: Association Between Basilar Artery Configuration and Vessel Wall Features: A Prospective High-resolution Magnetic Resonance Imaging Study

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Reviewer: Dao Pei Zhang

Reviewer's report:

This is an interesting study. The authors investigated the relationship between distal and proximal anatomical configurations of basilar artery (BA) and vessel wall features on high resolution magnetic resonance imaging (HRMRI). They found that the complete and incomplete group configuration of BA did not associate with vessel wall features. The proximal configuration of BA was related with intraplaque hemorrhage and the distal configuration of BA was associated with strong plaque enhancement.

However, the study had some issues which needed to elucidate.
1. There are some conflicting expressions in the discussion, such as "the author stated that the complete and incomplete group configuration of BA did not associate with vessel wall features. However, the authors also stated that the incomplete distal configuration of BA indicated different hemodynamics and blood flow reserve on the top of BA. The fPCA indicated that most or all the blood flow of PCA was from ipsilateral internal carotid artery. The fPCA will change the flow pattern causing the changing of regional wall shear force. The study showed that blood flow shear stress act on wall causing endothelial injury and plaque instability, presenting with plaque enhancement." All in all, the present study had some contradictory conclusions compared to the past studies, in my opinion, the author did not clearly elucidate this issue in the discussion.
2. The study needed to perform some hemodynamics evaluations because it is very important for incomplete configuration of BA associated with plaque pattern.
3. How many stroke patients are in the study? The mechanisms of stroke also should be showed.
4. The figures should be showed the incomplete BA with arrows, for example, the case 2 did not clearly display the fPCA.
5. The study design should set up a control group.
6. There are some minor language errors.

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.

No

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

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