Reviewer’s report

Title: Choroidal Structural Changes Correlate with Severity of Diabetic Retinopathy in Diabetes Mellitus

Version: 1 Date: 09 Apr 2019

Reviewer: Jee Taek Kim

Reviewer's report:

In this study, the authors studied the changes of the choroidal thickness and choroidal vascularity index (CVI) and their correlation with severity of diabetic retinopathy (DR).

They found that eyes of patients with DM showed decreased CVI compared with normal controls and that choroidal thickness and CVI significantly increased with severity of DR eyes compared with DM eyes and normal. However, this study has several concerns.

Comment

1. CVI in patients with diabetes was previously reported by Kim et al. (Sci Rep. 2018 Jan 8;8(1):70)

Please clarify the difference with this previous study in Introduction and and add discussion about the differences in Discussion.

2. In this study, DME patients were not included. Why the eyes with DME were not included?

3. The major result of this study is the changes of CVI. Please clearly present using graph the changes of choroidal thickness and CVI that was presented in Table 2 and 3.

4. The changes of choroidal thickness in eyes with diabetic retinopathy in the previous reports have been going on debates. Considering the debates, the number of enrolled eyes were relatively small. Add this on limitation of the study.
5. There are no subsection as to limitation. Please describe the other potential limitations.

6. The authors described possible reasons for debates on choroid. However, authors have to add previous reported variables as to choroid with reference as follows; age, diurnal variation, refractive error, systemic factors, hypertension or blood pressure, the status of kidney status.

7. Please rewrite the discussion with intensive literature review.

8. Inclusion criteria: The choroid in eyes with DR was affected by intravitreal injection or laser treatment. Please clarify whether the eyes were treatment-naïve eye or treated eyes.

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
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