Reviewer's report

Title: Absolute and estimated values of macular pigment optical density in young and aged Asian participants with or without age-related macular degeneration

Version: 1 Date: 26 Feb 2017

Reviewer: Naoyuki Tanimoto

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In this manuscript by Ozawa et al, absolute and estimated values of macular pigment optical density were measured in healthy volunteers and patients with age-related macular degeneration (AMD) using a commercially available device (MPS II). Absolute values were not detectable in approximately 1/3 to 1/2 of aged cases, even in subjects with normal foveal and parafoveal appearance. In cases in which the both types of values could be estimated, there was a significant correlation between them. Estimated values obtained from AMD and AMD-fellow eyes were lower than control eyes.

Although the cases enrolled in this study were somewhat limited (also mentioned by the authors in the Discussion), the data in this study would be valuable to facilitate further investigations for the topic.

The manuscript is well written, and the data have been treated properly.

I have a couple of questions and comments:

1) How is/was the test-retest reliability?
2) Were the measurements performed in miosis or in mydriasis?
3) Could lens opacities be the major factor to avoid an estimation of absolute values in the aged subjects in this study? Were there any other possible factors/reasons?
4) Not for this manuscript, but it is interesting to compare values between pseudophakic AMD patients and pseudophakic age-matched control subjects with a clear cornea and in conditions after a Nd:YAG posterior capsulotomy, or more simply to examine values pre and post cataract surgery in cases with normal retinal functionality.
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

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Please indicate the quality of language in the manuscript:

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