Reviewer’s report

Title: Effects of Cataracts on Flicker Electroretinograms Recorded With RETeval™ System: New Mydriasis-Free ERG Device

Version: 0 Date: 09 Sep 2015

Reviewer: Naoyuki Tanimoto

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In this manuscript by Miura et al, flicker electroretinograms (ERGs) were recorded from eyes with cataract (grade 2 and grade 3) as well as from eyes with intraocular lens (IOL) through a skin electrode using a new, commercially available, mydriasis-free ERG device (RETeval). The authors have found significant differences in both amplitude and implicit time among each of the groups, demonstrating influences of conditions/types of the lens on the flicker ERG.

As mentioned in the Discussion, this study could have been further optimized, e.g. obtaining ERGs before and after cataract surgery from the same eyes. However, the data in this study would be helpful for subsequent investigations using the RETeval system and its data interpretations.

Below are suggestions for changes to improve the manuscript:

1) Methods, page 7: Please add the following details about the ERG methods: a) whether the contralateral eye was covered, b) whether any background light was used, and most importantly, c) how to define and measure amplitude and implicit time. Were those of the fundamental component analysed automatically with the software of the RETeval?

2) Please include data about the pupil size during the recording. Was there any difference among the groups? It is also important due to the work by Kato et al [12].
Minor points:

Page 4 lines 7-8: Flicker ERGs reflect postreceptoral neural activities when the retina is stimulated with fast flicker (but not well at low stimulus frequencies).

Page 8 line 6 from the bottom: 4.4 µV, not 4.4 V.

Page 10 line 8 from the bottom: Stiles-, not stiles-.

Page 11 line 4 from the bottom: "stimuli" is a plural noun.

Page 11 line 3 from the bottom: The abbreviation "ISCEV" should be spelled out in full.

Page 11 line 3 from the bottom: Is there any reason for citing one of the previous ISCEV standards? If not, the current standard would be more appropriate.

Page 12 lines 7-11: The structure of this long, complicated sentence should be improved.

Figures 1 and 2: The figures should be in black-and-white.

Are the methods appropriate and well described?

If not, please specify what is required in your comments to the authors.

No

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:

Acceptable

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