Reviewer's report

Title: The application of wide-field laser ophthalmoscopy in fundus examination before myopic refractive surgery

Version: 0 Date: 05 May 2017

Reviewer: Jessica IW W Morgan

Reviewer's report:

The purpose of this paper is to compare the efficiency of the Optos wide-field SLO at detecting retinal complications from myopia in comparison with the Goldmann three-mirror contact lens examination and the mydriatic slit-lamp examination. The Optos wide-field SLO detected statistically higher frequencies of retinal complications from myopia compared with slit-lamp examination. The Optos SLO performed comparably to the Goldmann three-mirror contact lens examination in all areas except for vitreoretinal adhesions for which the Goldman three-mirror examination was superior.

Major Comments:

1.) What seems to be missing from this manuscript is a short discussion about what the authors would recommend now knowing the results of this study. Is the Optomap sufficient to replace the Goldman? Is the Goldman alone recommended? Should both be done prior to LASIK?

2.) A short paragraph discussing the following would also make the paper more impactful: Do the results of these exams influence the outcome for patients to get LASIK? Do having these retinal complications exclude patients from undergoing LASIK?

3.) Several portions of the current manuscript appear to contradict each other, leading the reader wondering whether the study can give the reader information about how this information should influence practice. Examples:

Page 7 first sentence and fifth sentence are directly contradictory: "vitreoretinal adhesion detection, the Goldman three-mirror contact lens examination had a better performance than the Optomap 200Tx (p<0.05)." and "There was no statistical difference between the Optomap 200Tx and Goldmann three-mirror contact lens (p> 0.05)."
Page 9 sentences on lines 15-30. 1st sentence: "Optomap…was less than with the Goldmann…"
2nd sentence: "showed no statistical significance between…[the two exams]"
3rd sentence: "Optomap…was less than when using the Goldmann…” Page 8 line 44-46: "Optomap 200Tx examinations was similar to the Goldmann"

Other comments:

1.) Page 7 line 57: "It is now possible to scan 200 degrees of the retina." 200 degrees is measured from the center of the eye. It would be better to report visual angle which is far less than 200 degrees. The optomap also scans a farther extent horizontally than vertically which should also be included in any discussion of field size.

2.) Page 8 the entire paragraph beginning line 17: "Because of its high efficiency…” is not relevant and should be deleted.

3.) Page 8 line 22: All 83 eyes were treated for myopia complications? Please clarify.

4.) Page 8 line 32: Sentence beginning "Lengyel I et al reported a detection rate of 81.1% in eyes with age-related macular degeneration…” is not relevant and should be deleted. The next sentence in the same paragraph is repeated from the results section. The last sentence in the same paragraph beginning "For peripheral retinal lesions,…" is new info but probably belongs in the Results section that compares the three methods (page 6 line 44) rather than in the discussion.

5.) Table 1 is completely written in the text and is not needed.

Minor comments:

1.) Page 5 line 5: The axial lengths reported in the paper text are different from the table.
2.) Page 6 line 9, line 22, line 34 (start of each paragraph describing three tests): What does "38 eye (24.3%) were detected with myopia"? All eyes in the study (78) had myopia, so how is myopia "detected"?

3.) Page 7 line 45: typo should be "vitreous and retina" rather than vitreous and retinal"

4.) Page 8 top: "This can provide a much larger image of the peripheral retinal than the traditional Optomap 200." This is not relevant to the current manuscript.

5.) Page 8 line 54: firstly is misspelled.

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.

No

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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