Reviewer's report

Title: Correlation between structure/function and optic disc microcirculation in myopic glaucoma, measured with laser speckle flowgraphy

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Reviewer: Paolo Fogagnolo

Reviewer's report:

This paper deals with the diagnostic ability of flowgraphy in discriminating between normality and glaucoma in myopic eyes.

In general, the paper is excessively enthusiastic on a technique which is interesting but up-to-now used only on experimental settings and with little literature. This may mislead readers.

The authors should reconsider their manuscript in view of this criticism, and give more emphasis to standard procedures (ie SAP, OCT). I am also sceptical on the two points of Methods described below.

Compulsory changes:
- 1 eye per patient should be included, chosen at random.
- Glaucoma diagnosis was very rigorous (SAP: cluster and GHT and PSD; defects corresponding to OCT), and may actually have missed early perimetric changes. As a reader, I would be interested in inspecting data (mean +/- sd) and the diagnostic ability of flowgraphy using different diagnostic definition of glaucoma: only OCT, only SAP (strict criteria as above), only SAP with looser criteria (perhaps only GHT or PSD), OCT+SAP. This would allow a direct comparison of effectiveness between tests (and enhance the interest of the paper), in particular in those patients with normal SAP but morphological signs of disease.

Specific comments:

Introduction

"Reliable way of detecting glaucoma that avoids the need to use standard automated perimetry". SAP is the standard for glaucoma diagnosis, and it HAS TO BE USED, even if it may not detect all early cases.

"There have already been a number of reports that used MBR to evaluate blood flow." Actually, literature on the topic is limited. In any case, please mention all relevant papers here.

“We believe”; “optic nerve microcirculation, rather than mechanical stress, is a promising candidate”. I would invite the Authors to be more objective, above all in Introduction.

Review style: “disc deformation”.
Level of interest: An article of limited interest

Quality of written English: Acceptable

Statistical review: Yes, and I have assessed the statistics in my report.

Declaration of competing interests: I declare that I have no competing interests