Imaging limbal and scleral vasculature using Swept Source Optical Coherence Tomography

Dear Editor,

We appreciate the reviewer careful reading of the manuscript, their detailed comments, and the decision to allow publication. We have carefully revised the manuscript to address the comments raised by the reviewer. Please, find a point-by-point response to the reviewer comments and description of changes made in the manuscript.

Thank you for your kind consideration.

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Comment 1:
1. Please revise numbering in afiliations ? shall be ?2? instead of ?3?

It was a typo error. We have changed it in the revised version.

Comment 2:

Line 12 right column, page 1: ?However, most of these studies have been performed _____ spectral domain OCT systems. Swept source OCT at 1050 nm has better performance compared with Spectral OCT in terms?- missing word in the sentence Also spectral OCT and spectral domain OCT are not defined earlier in the text ? maybe would be better to write ?However, most of these studies have been performed by Fourier domain OCT with a spectrometer (spectral OCT and spectral domain OCT)?

We agree that using the terms Fourier domain OCT, Spectral OCT and Spectral-domain OCT may cause confusion. Accordingly, in the second paragraph on p.1 we added few sentences describing differences between Time-domain and Fourier-domain OCT. This serves also as explanation of terms used in following sections. We corrected also sentence with missing word.

Comment 3:

It would be also recommended to cite paper of Vakoc from Nature Medicine, which demonstrated lymphatic vessels visualized by swept source OCT for the first time.

Thank you very much for this comment. We added this reference to the 5th paragraph on p. 1. We pointed out that the results in Vakoc paper show lymphangiography without contrast dyes. Standard methods of lymphatic system visualization require radiographic or fluorescent compound to be injected prior imaging. Additional information on methods of lymphatic imaging is inserted in Introduction.

Comment 4:

Second paragraph, page 3: ?The large empty spaces are cysts which may result from contact lenses wearing.? This is only a speculation ? sclera has strong ability to create cystic structures, which may be also related to the natural aqueous regulatory system or can be caused by any inflamatory or pathologic condition in this region. Please remove this statement or move it to the Discussion and elaborate more about such hypothesis.

Yes, the statement in the manuscript is a speculation. However, a healthy subject was imaged. We also noticed that these cysts are dynamic, i.e. volume and number change in time. We agree with reviewer statement on cystic structures in the sclera. Accordingly, we decided to add a sentence to the part describing the cysts (paragraph 2, p. 3).

Comment 5:

Please explain how can you differentiate vascular systems. Is there any image/data processing tool, which would be able to perform such differentiation?

Generally, identification of vascular systems requires advanced signal processing methods. Possible method should take advantage of different characteristics of vessels in OCT images. These properties were pointed in the first paragraph on p. 3. In spite of the fact that shadowing effect and lack of signal are not strong indicators and may lead to misinterpretation in some cases, they are potentially the easiest and straightforward properties for a proper vasculature identification.