

Response to: Choroidal thickness changes after dynamic exercise as measured by spectral-domain optical coherence tomography

Sir,

We appreciate the interest in and comments.^[1] Some controversy accompanies the presence of autoregulative mechanisms in choroidal circulation. There are a lot of vasoactive substances both endogenous and exogenous that have been shown to affect the choroidal thickness (CT). We want to emphasize autonomic innervation, and autoregulation of choroid in particular, and we agree that the autoregulatory mechanisms of choroidal blood flow are extremely complex. However, the choroidal blood flow is thought to exhibit only a small amount of autoregulation compared to the retinal blood flow. Therefore, the CT is shown to be influenced by numerous extrinsic factors including blood glucose and blood concentrations of oxygen and CO₂.^[2,3] Thus, it is not surprising that hypothalamus is one of the main centers responsible for CT. On the other hand, the change in CT is thought to be obtained by redistribution of fluids or changes in the tonus of nonvascular smooth muscle.^[4] Previous studies showed that choroidal blood flow changes in the contralateral eye when the ipsilateral eye was illuminated.^[5] These results indicate that the response of choroidal blood flow is under neural control. Choroidal blood flow was found to decrease from light to dark adaptation whereas a decrease in retinal blood flow during illumination has been found in these studies. The author also mentions that lighting and light intensity of the room are important factors during optical coherence tomography (OCT) measurements, and it is very likely that they affect the test results. However, it may be necessary to ask how much light affect the CT measurements. However, we cannot answer this question, because when we searched the literature, we did not find any studies that evaluated the

CT during light and dark by means of OCT. Hence, in our study, all measurements were performed under the standard room lighting.

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Nil.

Conflicts of interest

There are no conflicts of interest.

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