Correspondence

Comment on: Crossover to Photodynamic Therapy or Micropulse Laser After Failure of Primary Treatment of Chronic Central Serous Chorioretinopathy

EDITOR:

WE READ WITH INTEREST THE RECENT ARTICLE BY VAN RIJSsen and associates[1] regarding their REPLACE Trial. The PLACE Trial randomized eyes with chronic central serous chorioretinopathy (CSCR) to either half-dose photodynamic therapy (HD-PDT) or high-density subthreshold micropulse laser (HSML). The reported outcomes favored the HD-PDT group.[2] More recently, van Rijssen and associates[1] conducted the REPLACE Trial, where patients with persistent subretinal fluid exiting the PLACE trial were invited to participate. Those eyes that had failed HD-PDT were treated with HSML and those that had failed HSML were treated with HD-PDT. Again, the reported outcomes favored the HD-PDT group.

Before accepting these results, we need to clarify certain details regarding the treatment. The authors claim that the subthreshold micropulse laser was delivered in a dense pattern of small adjacent nonoverlapping laser spots using a 810 nm laser.[2] In a later publication of the same trial, the authors report that the micropulse laser spots were delivered with overlapping spots.[3] If the spots were intentionally overlapping, maybe some of the undertreatment could be lessened if the treatment area was small. However, if the treatment area was large, overlapping spots do not guarantee total area coverage, because the burns are invisible. Can the authors clarify and state whether the laser burns were overlapping or nonoverlapping?

To the best of our knowledge, none of the currently available 810 nm lasers are able to deliver laser spots using an automated multispot pattern scan. A multispot pattern scan would be advisable to ensure adequate placement of the laser spots, particularly if the number of spots is large. In the PLACE trial the HSML group received a mean 187 ± 209 laser spots, which is a considerable number if one is trying to place "invisible" spots next to one another. If a multispot pattern scan was not used in the PLACE trial, it is very likely that eyes in the HSML group were undertreated, since it is practically impossible to place the spots, given the lack of visibility of the spots themselves. The authors suggest that by increasing the laser power one may overcome a possible undertreatment.[3] However, as Luttrull[4] argued, one cannot increase the therapeutic effect of HSML simply by increasing the power. Therefore, it becomes important for the authors to specify the laser manufacturer and if a multispot pattern scan was used or not.

Several lasers from different manufacturers with multispot and micropulse capability are currently commercially available. These may be perfectly suited for HSML. Before we discard HSLM for CSCR, further studies using this technology are warranted to completely assess its role, if any, in the treatment of CSCR.

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Reply to Comment on: Crossover to Photodynamic Therapy or Micropulse Laser After Failure of Primary Treatment of Chronic Central Serous Chorioretinopathy

WE THANK DRS WU AND ROCA FOR THEIR INTEREST regarding our studies on chronic central serous chorioretinopathy (CSC), including the PLACE trial and the REPLACE trial.[1,2]

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In response to their comments we would like to clarify how the high-density subthreshold micropulse laser (HSML) spots were applied to the retinas of patients treated in the PLACE trial. The laser spots were positioned adjacent to each other in a nonoverlapping fashion, as depicted in Figure 1 in the PLACE trial report and Figure 2 in PLACE trial report no. 3.[1,3]

The HSML device that was used in all centers during the PLACE trial and REPLACE trial was manufactured by Iridex, and no multispot pattern scan was used. A myriad of settings (for example frequency, spot size, exposure time, and duty cycle) can be used with HSML treatment, which might each theoretically alter the therapeutic effect. However, the site of the mechanism of action (activation/stimulation of the retinal pigment epithelium) is not altered by adjusting these settings. The vast majority of literature on CSC points toward the choroid as the root cause of accumulation of subretinal fluid; this observation is supported by the higher efficacy of a treatment that targets the choroid, such as photodynamic therapy.[4]

Drs Wu and Roca propose that further studies on the role of multispot micropulse laser treatment in CSC are warranted. To do this, a well-designed large, properly powered randomized controlled trial with a predefined study protocol is essential.[4,5]

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CONFLICT OF INTEREST DISCLOSURES: SEE THE ORIGINAL article for any disclosures of the authors.

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Comment on: Evaluating Goldmann Applanation Tonometry Intraocular Pressure Measurement Agreement Between Ophthalmic Technicians and Physicians

EDITOR

WE READ WITH GREAT INTEREST THE ARTICLE BY MIHAIlovic and associates[1] on Goldmann applanation tonometry agreement between ophthalmic technicians and physicians. Authors looked into one of the important aspects of patient management in glaucoma, the intraocular pressure (IOP) measurement by Goldmann applanation tonometry (GAT), and concluded that the physician-technician disagreement while measuring IOP using GAT was higher than 2 physicians even after educational intervention. We agree with the authors that, because GAT is a subjective test, one of the important limitations was the intra- and interobserver variability. However, we would like to mention a few points which require further discussion.

First, IOP was measured using the same GAT between 2 physicians in the same chair, one after the other, but IOP was measured using different GAT among physician and technician. We assume that the patient was examined in 2 different rooms between the physicians and technicians and that there would be a time lag between the 2 measurements. We would like to know the time gap between these 2 readings and whether circadian rhythm has any influence on these measurements. The authors also mentioned that the measurement of IOP by 2 different tonometers would only have minimal impact on the outcome as the tonometers were calibrated every week. As authors have followed manufacturer's instructions for calibration, we would like to know the acceptable calibration error range. Because the manufacturers recommended an acceptable calibration