Letter to the Editor

Effect of posterior capsulotomy with a neodymium:YAG laser. Assessment of safety in foveal thickness, intraocular pressure and endothelial cell counts in pseudophakic patients with posterior capsular opacity

Efecto de la capsulotomía posterior con láser neodymium:YAG. Valoración de seguridad en el grosor foveal, la presión intraocular y el recuento de células endoteliales en pacientes pseudofáquicos con opacidad de cápsula posterior

Dear Editor,

I would like to congratulate Dr. Ruiz-Casas et al. for the recent paper on the safety of Nd:YAG laser for treating posterior capsular opacification (PCO). In said paper, the authors measured best corrected visual acuity, foveal thickness, intraocular pressure and endothelial cell count before and after capsulotomy in a group of 31 patients affected by monocular PCO and concluded that after the procedure the only parameter to exhibit improvement was the best corrected visual acuity, while the remaining parameters did not exhibit significant changes.

In what concerns one of the variables included in said paper, specifically foveal thickness, signal strength of the tests is not mentioned. Signal strength is an indicator of image quality in OCT. Its values range between 1 (poor quality) and 10 (best quality) in Zeiss equipment. An image is considered to be reliable if the ST value is of ≥5 for Stratus, or ≥6 for Cirrus, according to the instruction manuals of said devices.

Our group has researched the effects of PCO on the measurement of various macular thickness parameters obtained by OCT in two studies with sizes similar to that of Ruiz-Casas et al. and also with consecutive patient selection. In the first, carried out with time domain OCT (Stratus) 32 eyes were assessed, but only 13 (40.62%) were taken as reliable for pre- and post-laser thickness comparisons. Comparing the ST of all patients before and after capsulotomy, a significant increase of said variable was found after applying Nd:YAG laser. It was concluded that PCO can affect the quality of the test but, considering only the reliable pre-laser explorations, no changes were observed after capsulotomy in the 10 macular thickness variables taking into account.

However, in the second study, carried out with spectral domain OCT (Cirrus), a pre-laser versus post-laser comparison was made comprising 12 macular evaluation variables including all the eyes in the sample (n = 35) independently of the ST of each assessment. The result was that all mean thicknesses were larger after capsulotomy but, when only the initially reliable eyes were selected (these were 12, 34.28% of all eyes), none of the study parameters exhibited changes after capsulotomy.

As can be appreciated from the above studies, ST is important in the interpretation of macular measurements carried out with OCT if PCO is present. It would be interesting if the authors could share with the readers information about whether ST was considered in the study as an exclusion criterion as well as about the percentage of eyes with reliable and unreliable OCT found according to ST, and the change of this parameter between the pre- and post-capsulotomy assessments.

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