WET AMD

Retinal study using OCT is now a fundamental tool to manage patients with wet AMD. Since the introduction of PDT as an antiangiogenic agent a decade ago, OCT has provided information on the activity of neovascular membranes and determines the need to establish treatment, treatment response, and early signs of recurrence or resolution. The importance of this was that several multicenter studies were designed to evaluate treatment protocols of antiangiogenic therapies that rely on OCT as the main criteria for retreatment. This opened the door to development of treatment protocols determined by OCT such as those raised in the following studies to optimize treatment regimens in these patients.
PrONTO Study (Prospective Optical Coherence Tomography Imaging of Patients with Neovascular Age-Related Macular Degeneration Treated with intraOcular Ranibizumab): The injection protocols established in multicenter phase III studies of ranibizumab for neovascular AMD, the ANCHOR and MARINA trials, consisted of monthly intravitreal injections for 2 years for all study eyes that resulted in substantial gains in VA in various intermediate controls and at the final examination.[51-53] However, the dose of 24 injections carried a human and economic burden that made it difficult and impractical to administer. In phase I and II studies of ranibizumab before these studies, an extension study was conducted in which administration of new additional doses were left to the discretion of the investigator based on the presence of diffusion on FA or intraretinal or subretinal fluid on OCT. This subanalysis showed that often the presence of retinal fluid could be detected much earlier by OCT than FA, leaving the door open for a greater role of OCT in treatment.

Considering this, Fung and colleagues at the Bascom Palmer Eye Institute in Miami, Florida, proposed the PrONTO Study. In that study, after three monthly loading doses, monthly retreatments of ranibizumab were administered for 2 years according to the criteria in Table 3. Three criteria are based on OCT analysis (decreases exceeding five letters of VA [ETDRS] with fluid in the macula detected by OCT, increases exceeding 100 microns in central retinal thickness compared to previous lowest value measured by OCT or the recurrence of fluid on OCT in a previously dry eye) (Figure 18).[54]

The VA results of the study were similar to those of previous phase III trials but required significantly fewer injections (an average of 5.6 vs. 12 injections during the first year of the study and 9.9 vs. 24 injections to complete the second year).
The good results obtained with the varying numbers of injections based on OCT led to the inclusion of OCT as a primary criteria in new multicenter studies such as the SAILOR or SUSTAIN studies. Those studies included a larger number of patients than in the original early study (n = 40) and confirmed the role of OCT in patient monitoring.

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