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EARLY ANTI-VEGF TREATMENT IN CRVO ASSURES BETTER PROGNOSIS

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Introduction: Central retinal vein occlusion (CRVO) is the second most common cause of visual impairment due to retinal vascular disease in developed countries. The prevalence of CRVO is ranging from 0.1 to 0.5%. Risk factors are numerous, and fluctuations of IOP and thrombophilic conditions are considered to be the most important. Recently, extremely high levels of intraocular vascular endothelial growth factor (VEGF) were demonstrated in CRVO, leading to increased vascular permeability and leakage. Our objective is to present our approach in the management of treatment-naïve patients with CRVO.

Methods: All consecutive patients with CRVO referred to our tertiary eye hospital for a period of 2 years were evaluated. Inclusion criteria: retinal and optic disk edema, dilatation and turtuosity of all retinal veins, widespread deep and superficial hemorrhages, cotton wool spots. We performed comprehensive eye exam, detailed medical history, specialized imaging methods, glaucoma evaluation, (AS-OCT, gonioscopy, IOP control), as well as hematological investigation in all patients. Treatment included intravitreal anti-VEGF application with personalized regimen. Glaucoma patients were treated with medications, laser and trabeculectomy (TE). We analyzed several variables: the period between the CRVO diagnosis and the start of anti-VEGF treatment, number of injections, changes in central macular thickness (CMT) and in visual acuity (VA).

Results: Our pool of patients consisted of 38 persons, mean age 66.4 (29 -86). In 21 (56%) the CRVO is ischemic type, in 16 (42%) patients we diagnosed initial glaucoma damage (in 15 patients exfoliation syndrome was present). An interesting observation was the high number of patients - 13 (35%) with narrow, closed or occludable anterior chamber angle, diagnosed soon after the first CRVO symptoms. This finding was associated with history of accidental transient vision blurring and pain. In patients with start of treatment at the very beginning of macular edema we achieved immediate and excellent response after the first anti-VEGF application, and fast disappearance of exudations and hemorrhages. Hematologic studies demonstrated different types of hereditary thrombophilia in 7 patients.

Conclusions: Our clinical experience demonstrate that best results in CRVO treatment could be obtained at early diagnosis, close follow up and early start of anti-VEGF treatment before pronounced macular edema occurs. Detailed evaluation of anterior chamber angle configuration and glaucoma management are mandatory for successful outcome in patients with initial CRVO symptoms.