

# POSSIBLE CONNECTION OF PERFORATING SCLERAL VESSELS AND ARTERY-VEIN COMPLEX TO CHOROIDAL NEOVASCULARISATIONS IN EYES WITH PATHOLOGIC MYOPIA

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**Purpose:** To determine the connection between myopic choroidal neovascularisation (mCNV) activity, perforating scleral vessels (PSV) and artery-vein complex (AVC) examined by optical coherence tomography (OCT).

**Methods:** Retrospective analysis of patients with mCNV before and after intravitreal aflibercept injection using multimodal imaging. The presence of PSVs, AVC and mCNV activity was assessed using swept-source optical coherence tomography images. Patients received 1 intravitreal aflibercept injection at baseline. Additional injections were performed in case of mCNV persistence or recurrence at monthly visits. Patients were under follow-up for a minimum duration of 12 months. Main outcomes were the relationships between number of injections and the prevalence of retinal-choroidal structural lesions.

**Results:** 13 eyes of 12 patients (2 male, 10 female, mean age  $62.4 \pm 10.1$  years) with CNV secondary to pathologic myopia were included in the study. PSV were found in 9 out of 13 eyes (69.2%), AVC – in 4 out of 13 eyes (30,1%) at the site of CNV. They were under or in contact with the mCNV in all cases. The mean number of intravitreal injections received by patients with mCNV was  $2.06 \pm 1.17$  along  $19 \pm 4.1$  months of follow-up. Eyes with AVC needed less intravitreal injections along the follow-up period, when compared with eyes without AVC.

## **Conclusions:**

1. Swept-source OCT is a high-quality method to detect PSV and AVC in the eyes with pathologic myopia.
2. Intravitreal aflibercept was effective for treatment of mCNV with clinically important visual and anatomic benefits achieved with a limited number of injections.
3. PSV may also play a pivotal role in the formation of myopic CNV.

4. AVC complex has an influence over myopic choroidal neovascularization activity resulting in less aggressive neovascular lesions than those with perforating scleral vessels only.

## **CONE -ROD DYSTROPHY WITH COMPLICATED MYOPIA (CLINICAL OBSERVATION)**

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**Purpose:** To mark the importance of early diagnosis of cone-rod dystrophy (CRD) and to recall informative examination methods and to show the results of medication antioxidant retinoprotection.

**Methods:** The clinical observation of patient E., 41 years old, who came to the Municipal Clinical Hospital No. 15 named O.M. Filatov in 2022 with complaints of blurred vision at dusk, periodically photophobia and eye floaters in both eyes. In the anamnesis these complaints have been noted for more than 17 years, myopia since 7 years, in 2007 sessions of retinal laser photocoagulation for dangerous areas of peripheral retinal dystrophies in both eyes, later - laser vision correction by LASIK method, in 2023 repeated retinal laser photocoagulation in both eyes.

No previous medical treatment for complicated myopia has been performed. Did not use glasses with UV protection. Profession is associated with visual and stressful workload (computer visual syndrome), from anamnesis morbi is known the disease of VVD, chronic gastritis, data on family history of ophthalmopathology are unknown to the patient.

When the patient was referred to Municipal Clinical Hospital No. 15 named O.M. Filatov, he was examined: Visual acuity test, Autorefractometry, Pneumotometry, Bio-ophthalmoscopy (Gonioscopy), Computerized perimetry, B-scanning, Optical coherence tomography (OCT), Fundus pho-