

EVALUATION OF THE SURGICAL TREATMENT OF IDIOPATHIC MACULAR HOLE WITH THE USE OF OPTICAL COHERENCE TOMOGRAPHY

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Introduction. Idiopathic macular hole is a defect that affects mostly elderly patients. This condition is encountered on average in 3 patients per 1000 people, mostly in females between the ages of 60 and 70. By limiting central vision, this defect negatively affects a patient's quality of life. A noninvasive and touchless visualization system, i.e., optical coherence tomography (OCT), enables the physician to diagnose this disease quickly and accurately, as well as to determine its stage. New treatment methods, involving vitrectomy with a surgical removal of retinal internal limiting membrane (ILM) and air tamponade, offer hope for improving the standard of life for patients suffering from this disease.

Aim. To evaluate the effectiveness of surgical treatment of idiopathic macular hole in patients with several years' history reported in the interview, with the hole assessed as morphologically closed on the basis of the OCT examination. Improvement of distance visual acuity was established on the basis of the Snellen eye chart.

Materials and methods. The prospective study involved 25 patients (25 pairs of eyes), who underwent surgical treatment due to idiopathic macular hole confirmed by OCT. The treatment involved vitrectomy and air tamponade of the retina. Treatment effectiveness was evaluated on the basis of the OCT results by comparing macular morphology before the procedure and 2–3 months afterwards. Retinal morphology was compared to the best corrected visual acuity before and following the surgery.

Results and discussion. In 36% of patients, a complete morphological closure of the idiopathic macular hole occurred following the surgery, which was confirmed by the OCT scans. In 68% of patients, improvement in the best corrected distance visual acuity was achieved, on average by 1.2 and more lines on the Snellen chart.

Conclusions. Vitrectomy with the ILM removal, combined with air tamponade of the retina, is an effective treatment method for idiopathic macular hole also for patients with a long history of this condition. Vision improvement positively affects a patient's general quality of life.