

Glaucoma

Vestn Oftalmol. 2000 Jul-Aug;116(4):3-5.

[Differentiated approaches to the treatment of nonstabilized primary open-angle glaucoma with normalized intraocular pressure considering its pathogenic features]

[Article in Russian]

[Egorov VV](#), [Sorokin EL](#), [Smoliakova GP](#).

Clinical efficiency of dedystrophic treatments for nonstabilized primary open-angle glaucoma (POAG) in the presence of normalized intraocular pressure is compared in 168 patients (246 eyes). In one group of patients ischemic angiopathy and hyperreactivity of optic vessel adrenoreceptors associated with hypokinetic central hemodynamics and constitutional metabolic status of the organism was corrected by cinnarisin and riboxin. Patients with predominating congestive angiopathy symptoms, hyper- or eukinetic circulation and "slow" acetylation were treated by pantothenic acid, endotelon, and hyperbaric oxygenation. In both groups epithalamine, eiconol, and magnetic laser therapy were used, if indicated. This helped stabilize the process in 91% patients with initial POAG, in 87.5% with well-developed condition vs. 66.1% and 38.2% patients treated by traditional therapy (period of observation 3 years).

Vestn Oftalmol. 1996 Jan-Mar;112(1):6-8.

[Possibilities of magnetotherapy in stabilization of visual function in patients with glaucoma]

[Article in Russian]

[Bisvas Shutanto Kumar](#), [Listopadova NA](#).

Courses of magnetotherapy (MT) using ATOS device with 33 mT magnetic field induction were administered to 31 patients (43 eyes) with primary open-angle glaucoma with compensated intraocular pressure. The operation mode was intermittent, with 1.0 to 1.5 Hz field rotation frequency by 6 radii. The procedure is administered to a patient in a sitting posture with magnetic inductor held before the eye. The duration of a session is 10 min, a course consists of 10 sessions. Untreated eyes (n = 15) of the same patients were examined for control. The patients were examined before and 4 to 5 months after MT course. Vision acuity improved by 0.16 diopters, on an average, in 29 eyes (96.7%) out of

30 with vision acuity below 1.0 before treatment. Visocontrastometry was carried out using Visokontrastometer-DT device with spatial frequency range from 0.4 to 19 cycle/degree (12 frequencies) and 125 x 125 monitor. The orientation of lattices was horizontal and vertical. The contrasts ranged from 0.03 to 0.9 (12 levels). MT brought about an improvement of spatial contrast sensitivity by at least 7 values of 12 levels in 22 (84.6%) out of 26 eyes and was unchanged in 4 eyes. Visual field was examined using Humphry automated analyzer. A 120-point threshold test was used. After a course of MT, visual field deficit decreased by at least 10% in 31 (72%) out of 43 eyes, increased in 3, and was unchanged in 9 eyes; on an average, visual field deficit decreased by 22.4% vs. the initial value. After 4 to 5 months the changes in the vision acuity and visual field deficit were negligible. In controls these parameters did not appreciably change over the entire follow-up period.

Oftalmol Zh. 1990;(3):154-7.

[The effect of a pulsed electromagnetic field on the hemodynamics of eyes with glaucoma]

[Article in Russian]

[Tsisel'skii Iu V](#), [Kashintseva LT](#), [Skrinnik AV](#).

The influence of pulse electromagnetic field (PEMF) on hemodynamics of the eye in open-angle glaucoma has been studied by means of a method and a device proposed at the Filatov Institute. The PEMF characteristics are: impulse frequency--50 Hz, exposition--0,02 sec., impulse shape--square, rate of impulse rise--4.10(4) c rate of magnetic induction rise--2.10(4) mT/c, amplitude value of magnetic induction at the impulse height--9.0--8.5 mT, duration of the procedure--7 min., a course--10 sessions. Observations over 150 patients (283 eyes) with latent, initial and advanced glaucoma have shown a positive influence of PEMF on hemodynamics of a glaucomatous eye: a rise of rheographic coefficient and relative volume pulse in 87,99 and 81,63%, respectively. The degree of the rise and restoration frequency of rheographic values of the glaucomatous eye under the influence of PEMF to the age norm was more expressed at initial stages of the glaucomatous process (latent and initial glaucoma).

Oftalmol Zh. 1990;(2):89-92.

[The effect of a pulsed electromagnetic field on ocular hydrodynamics in open-angle glaucoma]

[Article in Russian]

[Tsisel'skii Iu V](#).

The influence of pulse electromagnetic field on the hydrodynamics of the eye in open-angle glaucoma has been studied using the method and the device suggested at the

Filatov Institute. The characteristics of the action were: impulse frequency--50 Hz, duration--0.02 sec., pulse form--rectangular, rate of pulse rise--4/10(-4) sec., rate of magnetic induction rise--2/10(-4) mT/sec., amplitude value of magnetic induction at the pulse level--8.0-8.5 mT, duration of the procedure--7 min. Ten session in a total. Observations over 150 patients (283 eyes) with latent, initial and advanced glaucoma have shown that the usage of pulse electromagnetic field exerts influence on the hydrodynamics of the eye in open-angle glaucoma; stimulates the rise of aqueous outflow and production, the reduction of the Becker's coefficient. At the latent stage of the disease, normalization of outflow was recorded in 25% of cases, at the initial and advanced stages--in 17.8% and 16.0% of cases, respectively. The investigations carried out allow to recommend the mentioned method for a complex treatment of open-angle glaucoma.

Vestn Oftalmol. 1994 Apr-Jun;110(2):5-7.

[The effect of noninvasive electrostimulation of the optic nerve and retina on visual functions in patients with primary open-angle glaucoma]

[Article in Russian]

[Kumar BSh, Nesterov AP.](#)

Electrostimulation courses with OEC-2 Ophthalmologic Electrostimulator were administered to 30 patients (36 eyes) with primary open-angle glaucoma and normal intraocular pressure. An active electrode was placed on the upper lid, an indifferent one on the forearm. Electric pulses (150-900 mcA) were grouped in several sessions, 30 sec each, divided by 30-45 sec intervals. Total duration of a procedure was 16 min, the course consisting of 10 procedures. Control group included 24 eyes of the same patients. The patients were examined before, immediately, and 4-5 months after the treatment. Noticeable changes in vision acuity and visual field were detected. Visual field was examined using Humphrey Field Analyzer and 120-point threshold related test. The treatment resulted in reduction of visual field deficit by 10% or more in 28 (78%) of 36 eyes, in its increase in 2 eyes, and in no changes in 2 cases. Visual field deficit decreased by 25% on an average as against the initial value. Four to five months after the treatment the changes in this parameter were negligible. Vision acuity increased after the treatment in 31 of 36 eyes by 0.17 diopters on an average; 4 to 5 months later no changes occurred. In control eyes no changes were detected either in vision acuity or visual field during and after the treatment.