EFFICIENCY OF DENS THERAPY FOR TREATING LESIONS OF THE OPTIC NERVE

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At present, search for efficient methods of treating diseases of the organ of vision resulting in irreversible changes of visual functions till its total loss is among most topical issues in ophthalmology. Diseases of the optic nerve occupy one of the highly important places in ophthalmology and are one of the main causes of blindness and impaired vision.

Purpose of the work: to examine therapeutic efficiency of the method of electrotherapy in prophylaxis and treatment of optic atrophy of different etiology. Dynamic electroneurostimulation was applied based on exposure of reflexogenic zones and acupuncture points in the paraor-bital region with short bipolar current impulses of different frequency, form of which changes depending on the values of electrical impedance of tissues in the subelectrode zone. The principle of "biological feedback" is used.

Dynamic electroneurostimulation of the paraorbital zone was carried out with the "DENAS+" apparatus with external paraorbital electrode (EPE) "DENS-glasses". Duration of treatment for each zone and the procedure as a whole was determined in compliance with indications for treatment. Duration of impulse series was from 0.3 to 5.5 seconds. Impulse frequency- 10 Hz. Duration of one stimulation procedure was 3-7 minutes. Treatment course included 10 procedures of electrostimulation.

94 patients (149 eyes) in the age from 15 to 87 years were examined. Of them, 80 patients (123 eyes) had complex drug and electro-pulse treatment. 14 patients (26 eyes) were included into the control group, which had only pharmacotherapy. For assessment of treatment efficiency, functional and hypotensive results were taken into account. After the treatment course, a positive effect was registered in all patients. Basic changes occurred in the peripheral visual field: it expanded in 73% of patients in total from 256±15.6 to 306±11.7 degrees ($P<0.05$). Reduction of the size of central and peripheric scotomas, which is the evidence of partial restoration of conductivity of optic nerve fibers and the retina, was registered. Central visual acuity after treatment increased in 38% of patients on average from 0.67±0.03 to 0.73±0.02 ($P>0.05$). Electro-oculogram (EOG) and electroretinogram (ERG) clearly showed the tendency toward improvement of metabolic processes. EOG displayed increased Arden coefficient to the normal values. EGR displayed increased "a"-wave amplitude from 35.5±2.30 to 59.2±3.96 mcV ($P<0.05$).

After comparative analysis of clinical and functional eye indexes, the most positive effect was registered in patients who had electropulse exposure in addition to traditional therapy in the complex treatment. The best results were registered in patients with vascular and inflammatory pathology of the optic nerve.