

MODERN POSSIBILITIES OF NON-DRUG TECHNOLOGIES IN THE TREATMENT OF MYOPIA IN CHILDREN

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We developed a technique for combined treatment of myopia by electrostimulation and laser action on oculomotor and ciliary muscles. Magnetic-laser device for ophthalmology "Milt-F with the irradiation of the region of the ciliary muscle in zones 3 and 9 hours was used. Percutaneous electrostimulation was carried out after 20 minutes. After laser irradiation with the apparatus "Amplipulse-5D" in the form of continuous action by a series of modulated vibrations. Sessions of laser and electrostimulation were conducted daily by a course of 10 procedures.

Eighty patients (160 eyes) with low grade myopia aged 7 to 16 years were monitored. The first main group consisted of 48 patients (96 eyes, 28 girls and 20 boys) who received combined treatment according to the developed method. The second control group of 32 patients (64 eyes, 18 girls and 14 boys) received traditional treatment. To assess the effectiveness of the treatment, visometry was performed without correction and with correction to the measurement of the positive part of the relative accommodation and the position of the nearest point of clear vision.

A significant improvement in the visual functions of vision was established during the combined treatment in all patients of the main group. At the same time, an increase in uncorrected visual acuity was observed on average 0.26 D, (0.25 ± 0.011), and a decrease in the maximum correcting lens force was 0.5–1.0 dpt. against the background of the complete disappearance of the spasm of accommodation. The course of physiotherapy influenced the state of the tone of accommodation by increasing the function of the ciliary muscle and relaxation of the habitual tonus of accommodation. At the same time, the work of the accommodative apparatus of the eye is normalized, which contributes to an increase in visual acuity.

Studies have shown that combined treatment of children with myopia allows to stabilize the accommo-

dation capabilities of the organ of vision. The improvement and stabilization of visual acuity is apparently facilitated by an improvement in the circulation of the retina, choroid, ciliary and oculomotor muscles, stimulating the photoreceptors of the macular region and enhancing the central fixation of the retina. Thus, it can be considered that an increase in visual functions with a change in refraction along all meridians with a tendency to emmetropy suggests that this state of instability is unstable, which in turn causes *interest* in the urethral oculomotor muscles in maintaining a certain radius of curvature of the cornea.

CONCLUSION. Combination treatment of myopia using an electrostimulation laser should be considered as one of the effective methods of treating myopia in children. At the same time, remission persists for 5–6 months, which requires a repeat course of restorative therapy. An optimal regimen for the implementation of therapeutic and prophylactic rehabilitation measures for myopia in children may be considered a combined application of the above method with a frequency of at least twice a year, which will help prevent the progress of myopia in children.