## The use of bioresonance therapy in the treatment of patients with progressive myopia

## A.V. Tarakanovsky

(Research Institute of Eye Diseases named after Helmholtz, Moscow, Russia)

Progressive myopia is one of the urgent problems of modern pediatric ophthalmology, since it is the most common cause of decreased vision in children (E.S. Avetisov, 1996, 1998). The unrelenting interest in the problem of myopia is due to the fact that in recent years there has been an alarming trend towards an increase in myopia. According to domestic and foreign authors, there is an increase in the frequency of myopic refraction and a decrease in the frequency of hyperopic refraction at a young age. The methods of treatment used to stabilize myopia (scleroplastic surgeries, electrical and laser stimulation, medication, acupuncture, visual gymnastics) give a lasting positive effect only in 50–65% of cases.

In recent years, much attention has been paid to the study of changes in the visual analyzer in myopia under the influence of visible light, which led to the creation of the concept of "deprivation myopia", which arises in connection with a deficit of visual afferentation (Guo SS et al., 1996; Schwahn HN, et al., 1997; Feldkaemper M. Et al., 1999). At the same time, it is known that the deficit of visual afferentation affects not only the formation of the organ of vision, but also the structure and functioning of the brain. As K. Ballacco Gabriele (1990) showed, long-term visual impairment affects the diencephalic-pituitary system, which leads to a weakening of scleral collagen in persons predisposed to this type of pathology.

Based on the analysis of numerous works by E.S. Avetisov (1986–1999), the leading role of accommodation in the processes of refractogenesis was proved, which, under certain conditions of visual work and hereditary predisposition can lead to the formation of myopic refraction. A number of works have shown that the weakness of the accommodative apparatus can be the result of the effect on the ciliary muscle of general disorders in the body, in particular, a decrease in the concentration of inorganic phosphorus (O.N. Savelyev, 1975), infectious and allergic diseases (A.M. Khaiton, 1974), natally caused vertebrobasilar insufficiency (T.G. Berezina, 1989). A decrease in scleral resistance is also associated with impaired calcium metabolism (VN Kolosov, 1982), a general increase in catabolic processes in the connective tissue in adolescents (MI Vinetskaya, 1989). Violations of immunological parameters in children with progressive myopia have been described: an increase in the activity of the monocyte-macrophage link, suppression of the T-cell link of immunity, an increase in the level of immunoglobulins, circulating immune complexes (TS Smirnova, 2001; Wittling W., 1998, etc.).

Based on the data presented, we carried out a consistent complex effect on the body, normalizing its general somatic condition with the help of bioresonance and induction therapy, and also used multiresonant magnetic and color therapy locally for stimulation visual functions and stabilization progression myopia.

Initial and dynamic examination included the dimension

visual acuity with correction, reserve of accommodation, refractometry, computer perimetry, measurement of the length of the anterior-eyes with posterior axis using ultrasound, electrophysiological studies (threshold, lability of the optic nerve, electroretinography), ultra sound study of scleral density, immunological studies (determination of the proliferative activity of lymphocytes, the level of immunoglobulins, circulating immune complexes).

The study of the energy-informational state of the patient's body was carried out using the vegetative resonance test (ART) "IMEDISTEST", EPD according to R. Voll. In addition to general diagnostics, patients were selected individual frequency therapy programs, colors, homeopathic remedies.

The study included 240 people with progressive myopia at the age from 3 to 18 years. The follow-up period ranged from 1.5 to 6 years (on average 3 years); the criterion for myopia stabilization was the absence of its growth for a year or more. The treatment was carried out in courses of 6-10 procedures 2-3 times a week; on average, the patient received 2 courses of therapy. Various combinations of the above methods were used (BRT and MT; BRT, MT and CT).

As a result, in 232 patients stabilization of myopia was achieved for 1.5 years or more. In the rest of the children, myopia continued to progress much more slowly than before treatment. At the same time, all patients showed an increase in visual acuity without correction, an increase in the supply of accommodation, in some cases - a decrease in the degree of myopia by 0.5–1 diopters. A positive trend was also revealed according to the data of electrophysiological and immunological studies. Thus, according to our data, the use of bioresonance therapy in the treatment of progressive myopia is significantly superior in efficiency to the currently existing treatment methods.

We explain this result by the systemic effect of BRT at all levels of self-regulation, including the activation of metabolic and energy processes in the cells of the retina and the central nervous system, connective tissue (inhibition of the processes of microfibrillary cleavage of the sclere), activation of blood flow in the organ of vision and the brain, normalization of hormonal and immune function. systems. All these pathogenetic mechanisms ultimately lead to an increase in the reserve and habitual tone of accommodation, increase the resistance of the sclera to stretching, and increase functional the ability of the entire visual tract to process information.

Statistical data are presented in tables.

 $A.V.\ Tarakanovsky\ The\ use\ of\ bioresonance\ the rapy\ in\ the\ treatment\ of\ patients\ with\ progressive\ myopia\ //\ XII$