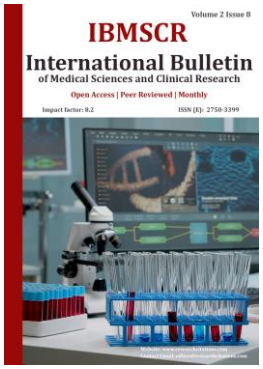

IDENTIFICATION OF THE RISK OF DEVELOPING PHYSIOLOGICAL SCLEROMALACIA IN DEVELOPING MYOPIA IN ADOLESCENTS AND ITS PREVENTION

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Abstract. In this scientific article, the risk factors affecting the development of scleromalacia in high myopia in adolescents, their origin, etiology, pathogenesis, clinic, diagnosis, complications and their elimination, as well as methods of treatment, are analyzed in a broad modern way.

Keyword:myopia, staphyloma, scleromalacia, conus.

The problem of myopia has been known since the time of Aristotle (384-322 BC). Violation of visual acuity caused by myopia makes it difficult to fully perceive information and prevents the formation of educational and work potential of the population (Zakharenkov V. V. 2010).

Since 2015, myopia has become an epidemic. According to BJSST, more than 290 million children, 19 million of whom are under the age of 18 suffer from refractive diseases. There are a lot of statistical data pointing to such a threatening and unpleasant trend at the international level: in Russia, myopia is 7-10% among preschool children (up to 7 years old), and 50-60% among school children (up to 7-15 years old). Among the population, high myopia is 25-30%. In the USA, Western Europe, it is on average 40%, in Japan, Hong-Kong it is 70-75%, in less developed countries it is 12-15%. Among the population, high myopia is 25-30%. In the USA, Western Europe, it is on average 40%, in Japan, Hong-Kong it is 70-75%, in less developed countries it is 12-15%. Experts say that by 2025, myopia will become an epidemic on a global scale. The growth of the disease is developing year by year. According to data, in 2050, 4.5 billion people will be sick and 115 million people will be blind. This is half of the globe. There are 1.4 billion people in China, of which 600 million suffer from myopia. Myopia is 40% among schoolchildren and 70% among students. Refractive anomalies in Uzbekistan are currently 30.9%. 10% of children enter school with myopia, and this figure reaches 30% by the time they graduate. Many researchers have proven that there is only one way to eliminate such a situation - early detection, evaluation and monitoring of myopia and its development, and practice based mostly on epidemiological results.

Many researchers have a negative effect on the increase in the number of people with impaired visual acuity. According to some estimates, by the end of this decade, a third of the world's population will suffer from myopia. Up to 96% - the highest prevalence rates of myopia are registered in the countries of East and Southeast Asia. There is evidence of increased prevalence in Europe and the United States.

Purpose:Identifying the risk factors for the development of scleromalacia in adolescents with progressive myopia and the issue of systematization of this condition show great difficulties.

Establish a set of standardized definitions for the classification of scleromalacia in pathological myopia to facilitate research and enable comparison between different populations.

Material and methodsAge of patients is an important risk factor for the development of scleromalacia and other pathological changes in progressive myopia. In adolescents with progressive myopia, the prevalence of scleromyalgia was low and increased with age. The most common changes in adolescents are optic disc herniation (37%) and peripheral optic atrophy (39%).

It was found that the frequency of scleromyaliasis increases 3.8 times between the ages of 20 and 35, and 1.4 times between the ages of 35 and 50. Studies have shown that the "peak" of the frequency of scleromyalgia is observed in adolescents aged 22-30 years. In the adult population (40 years and older) with high myopia, the prevalence and development of scleromyalgia is significantly higher (staphyloma — 23%). In addition, an association has been demonstrated between continued elongation of the eyeball and the development of scleromyalgia. It was found that 40% of the eyes of patients with high progressive myopia developed or developed scleromyalgia during an average follow-up period of 5 years. Changes noted include new manifestations and progression of pre-existing scleromyalgia, as well as the appearance or increase in the number of retinal tears.

Currently, it is clear that pathological myopia is one of the main health problems worldwide, and it is becoming an epidemic every year. The issue of systematization of this situation causes great difficulties.

First, a set of standardized definitions for classifying scleromalacia in pathologic myopia is needed to facilitate further research and enable comparisons between different populations.

Secondly, it is clear that pathological myopia is not a static disease, it shows development in almost every case by stretching the sclera and changing the retina. Nevertheless, risk factors for the development of scleromalacia in pathological myopia are not fully understood, and there is an urgent need to evaluate the effect of possible causes such as mechanical stress, degeneration and ischemia, which increase with age. There is no doubt that high myopia is associated with progressive and excessive elongation of the eyeball (PZO). As a result, various changes develop in the retina and sclera, including staphyloma orkangi, observed in eyes with high myopia, which is a complication of pathological myopia.

According to the classification of B. Kurtin (1977), 10 types of staphyloma are distinguished depending on their location and severity:: wide macula; narrow macula; parapapillary; nose; bottom; their combinations are distinguished by the presence of irregularities in the area of staphyloma.

Summary:Thus, it was determined that the main factors affecting the development of scleromalacia in developing myopia in adolescents are the biomechanics, biochemistry, morphology, and hydrodynamics of the eyeball. It was found that, apart from this, the presence of collogenous diseases and diseases of the gastrointestinal system in children and adolescents causes a violation of the activity of microelements in the sclera. In the treatment of the disease, treatment in cooperation with additional specialists is appropriate.

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