

3rd Global

Pediatric Ophthalmology Congress

March 22-23, 2018 | London, UK

Some results of research of biometric indexes of eyeball in children and teenagers with myopia

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Using of non-contact methods of research of biometric indexes of eye opens the prospect of their study for children. Monitoring of biometric indexes can become the key to prognostication of origin and warning of development of the complications of myopia. We studied biometric indexes of the eyeball in children and teenagers with myopia. Patients were divided into four groups (for 50 patients in each) depending on age. On a device IOL Master 500 determined axial length (AL), mean value of diameter and radius of curvature of cornea (CR). AL/CR ratio (ratio of axial length toward the radius of curvature of cornea) was calculated.

Biometric indexes of the eyeball in patients with myopia

| Groups | Diameter of cornea (mm) | CR (mm) | AL (mm) | AL/CR |
|-------------------|-------------------------|-----------|-----------|-------|
| I (3-5 years) | 10.8±0.01 | 7.45±0.01 | 24.8±0.02 | 3.32 |
| II (6-9 years) | 11.5±0.01 | 7.46±0.01 | 24.5±0.02 | 3.28 |
| III (10-13 years) | 11.5±0.01 | 7.46±0.01 | 24.1±0.03 | 3.23 |
| IV (14-18 years) | 11.6±0.01 | 7.47±0.01 | 24.6±0.03 | 3.29 |

Comparison of indexes was educed that AL had statistically a reliable difference for patients' 1st, 2nd and 3rd groups. For the 4th group the statistical difference of AL was reliable when compared with 1st and 3rd groups and did not have authenticity when compared with the 2nd group. The diameter of cornea and CR value in all groups remained within the limits of the norm. Thus, an increase of AL was determinative of development of myopia in all groups at congenital and acquired shortsightedness. AL/CR was higher three in all groups that allows considering this index as indicator of development of myopia.

Biography

Samadova Jamila completed her Graduation from Azerbaijan Medical University and PhD from Moscow Helmholtz Scientific Research Institute of Eye Diseases. She works as a Doctor-Ophthalmologist in Pediatric Department of Azerbaijan National Centre of Ophthalmology named after Academician Zarifa Aliyeva. She has published more than 30 papers in reputed journals.

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