Daniil

Research Institute of Eye Diseases, Russia

Biography

Daniil A. Myagkov, MD, is a researcher at the Research Institute of Eye Diseases named after M.M. Krasnov in Moscow, Russia. His primary academic interests include pediatric ophthalmology and strategies for myopia control. His work centers on optical biometry, axial length progression, and the clinical application of spectacle- and contact-lens–based interventions. He has experience conducting observational studies and is committed to integrating evidence-based methods into routine ophthalmic practice.

The effect of eyeglass correction with defocus design lenses on the progression of myopia in children and adolescents

Abstract:

Background: Myopia prevalence is rising, and axial elongation (AL) increases risks of MMD (Myopic Macular Degeneration), glaucoma, and retinal detachment. Defocus Incorporated Multiple Segments (DIMS) spectacle lenses induce peripheral myopic defocus and slow progression versus single-vision lenses [1–3].

Objective: To assess 12-month changes in AL and spherical equivalent (SE) with DIMS in routine practice, including stratification by baseline myopia and AL–SE coupling. Methods: Prospective observational study of 63 children (7–14 years). AL (optical biometry) and cycloplegic SE were measured at baseline and 12 months; paired tests and Pearson correlation applied ($p<0.05$). Results: Overall AL +0.16±0.06 mm; SE +0.31±0.08 D ($p<0.001$). Mild myopia: AL +0.16±0.06 mm; SE +0.26±0.09 D; $r=0.372$ ($p=0.0276$). Moderate: AL +0.19±0.17 mm; SE +0.41±0.15 D; $r=0.108$ ($p=0.537$).

Conclusions: DIMS are effective; benefits are most actionable in mild myopia, supporting stratified, behaviour-informed management.