

Title of Project: Tropical application of low-concentration (0.01%) atropine on the human eye with fast and slow myopia progression rate

NCT03374306

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Statistical analysis

Due to COVID-19-dependent closure of the university campus, the eye examinations were not always performed within the study-defined time window and were in-part delayed. To minimize the effect of delayed visits, change from baseline in SER and AL were normalized for time and expressed as annualized change for each participant. All participants included in the analysis had completed the baseline eye examination and at least 2 visits of follow-up eye examinations during the study period.

The data distribution was approximately normal (Shapiro-Wilk test – SER: $p = 0.16$; AL: $p = 0.27$). A univariate general linear model (GLM) was used to compare annualized change in SER and AL between the treatment groups (atropine vs. placebo), controlling for the baseline SER and age as covariates. Since a weakened central inner retinal response was reported as a risk factor for myopia development, the relationship between Ring 1 IC and annualized change in SER and AL were evaluated using GLM, and compared between the atropine and the placebo groups using moderator analysis. The correlation coefficients (R_p vs. R_a) were also compared between treatment types using Fisher's R-to-Z test in the Ring 1 IC, as well as other regions and MOFO mfERG parameters. All statistical procedures were performed with SPSS22.0 (IBM, Armonk, NY). Hochberg's adjustment was applied for multiple comparisons, with significance level set at $p \leq 0.05$. A receiver operating characteristics analysis was also performed to evaluate the predictive value of baseline Ring 1 IC on fast progressor (annualized progression ≥ 1.0 D) in each of the atropine and control group.