ARED52 Supplementation Slows Macular Degeneration in Non-Proliferative Idiopathic Type 2 Macular Telangiectasia

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Purpose:

Preliminary evidence suggests carotenoid supplementation may slow progression of non-proliferative Idiopathic Macular Telangiectasia Type 2 (IMT2). We hypothesized antioxidants in off-label Age-Related Eye Disease Study 2 (ARED52) formula could enhance this protection synergistically to prevents anatomic and visual deterioration in non-proliferative Idiopathic Macular Telangiectasia Type 2 (IMT2).

Methods:

A single center retrospective, comparative, interventional study of 82 IMT2 eyes treated with ARED52 formula and 122 untreated control eyes. Primary outcomes were visual acuity and spectral domain optical coherence tomography (SDOCT) anatomic characteristics including largest cavitation diameter, central macular thickness (CMT), and length of ellipsoid zone (EZ) loss at 2 years.

Results:

82 eyes of 43 patients were treated with ARED52 and 122 eyes of 70 patients served as controls. At 2 years, mean visual acuity remained stable (baseline 0.28 ± 0.18 to 0.26 ± 0.19 logMAR, p = 0.35) in the ARED52 group while the control group declined (baseline 0.26 ± 0.22 to 0.32 ± 0.24 logMAR, p <0.001). Mean change in visual acuity from baseline was significantly greater in control patients (-0.06 ± 0.15 logMAR) as compared to ARED52 (0.02 ± 0.13 logMAR; p <0.001). Mean diameter of ellipsoid layer (EZ) loss in the control cohort at 2 years was significantly increased at 2 years (baseline 475.6 ± 476.1 μm to 560.0 ± 519.8 μm, p <0.0001) while ARED52 treated patients remained stable (baseline 500.5 ± 529.8 μm to 502.1 ± 501.1 μm, p = 0.94). Mean change of EZ loss from baseline was significantly greater in the control group (-84.3 ± 167.3 μm) as compared to ARED52 patients (-1.5 ± 199.8 μm, p <0.01). CMT and greatest cavitation diameter remained stable for both cohorts over the study period and mean rate of change values were statistically similar between both cohorts.

Conclusions:

ARED52 formula supplementation in non-proliferative IMT2 is associated with preserved anatomical and visual outcomes at 2 years compared to natural history.