

Lutein but not α -tocopherol, supplementation improves visual function in patients with age-related cataracts: a 2-y double-blind, placebo-controlled pilot study^{*1}

B. Olmedilla PharmD^a, F. Granado PhD^a, I. Blanco^a and M. Vaquero MD^b

^a Unidad de Vitaminas, Sección de Nutrición, Clínica Puerta de Hierro, Madrid, Spain

^b Servicio de Oftalmología, Clínica Puerta de Hierro, Madrid, Spain

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Objective

We investigated the effect of long-term antioxidant supplementation (lutein and α -tocopherol) on serum levels and visual performance in patients with cataracts.

Methods

Seventeen patients clinically diagnosed with age-related cataracts were randomized in a double-blind study involving dietary supplementation with lutein (15 mg; $n = 5$), α -tocopherol (100 mg; $n = 6$), or placebo ($n = 6$), three times a week for up to 2 y. Serum carotenoid and tocopherol concentrations were determined with quality-controlled high-performance liquid chromatography, and visual performance (visual acuity and glare sensitivity) and biochemical and hematologic indexes were monitored every 3 mo throughout the study. Changes in these parameters were assessed by General Linear Model (GLM) repeated measures analysis.

Results

Serum concentrations of lutein and α -tocopherol increased with supplementation, although statistical significance was reached only in the lutein group. Visual performance (visual acuity and glare sensitivity) improved in the lutein group, whereas there was a trend toward the maintenance of and decrease in visual acuity with α -tocopherol and placebo supplementation, respectively. No significant side effects or changes in biochemical or hematologic profiles were observed in any of the subjects during the study.

Conclusions

Visual function in patients with age-related cataracts who received the lutein supplements improved, suggesting that a higher intake of lutein, through lutein-rich fruit and vegetables or supplements, may have beneficial effects on the visual performance of people with age-related cataracts.

Author Keywords: lutein; α -tocopherol; cataracts; supplementation study

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