THE ROLE OF MICRONUTRIENTS IN THE TREATMENT OF VITREOUS FLOATERS

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Introduction

AREDS and other studies with macular carotenoids have proven that chronic eye diseases can be modulated with micronutrients. Vitreous floaters can have a considerable impact on the visual perception and quality of life. So far there is no standard therapy for vitreous floaters.

As floaters may be a result of a disturbed connective tissue metabolism, interventions with food supplementation comprising of water-soluble antioxidants, modulators of the glycation of collagens, and inhibitors of collagenase, elastase and hyaluronidase were carried out.

As light scattering is a the one reason for the visual disturbances in case of vitreous floaters, a deficit in macular carotenoids might result in an aggravation of this disorder.

Methods

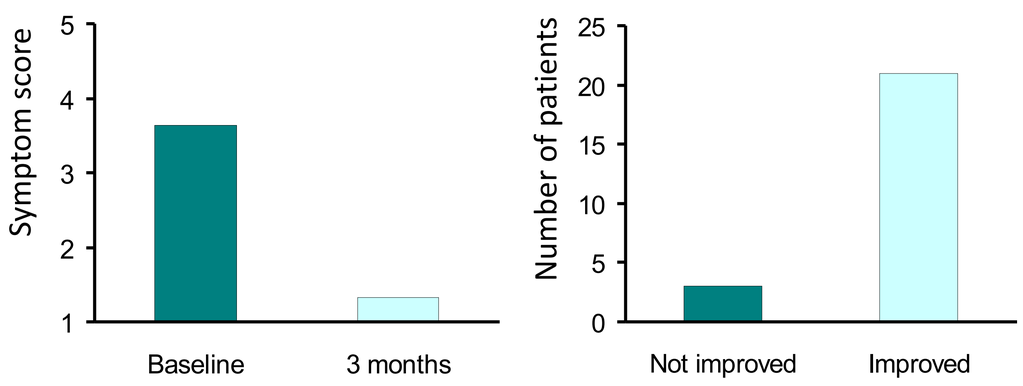
Two clinical supplementation trials have been performed in patients presenting with symptomatic vitreous floaters. A food supplement containing 125 mg of L-lysine, 40 mg of vitamin C, 25 mg of Vitis vinifera extract (procyanidines), and 60 mg of Citrus aurantinium flavonoids per capsule (VitroCap®) was tested.

Study 1: Non-controlled study in 24 patients; treatment: 1 capsule per day, orally for 3 months. Symptoms were measured utilizing a 5 point assessment scale (1 - 5).

Study 2: Prospective, monocentric, controlled study in 62 patients between 40 and 63 years, presenting with bilateral floaters; 29 patients randomised to treatment: 1 capsule per day, orally for 3 months; 33 patients randomised to control: watchful waiting. Symptoms were assessed using a questionaire. The statistical significance of differences between the control and the treatment group was determined using the χ2-test.

Results

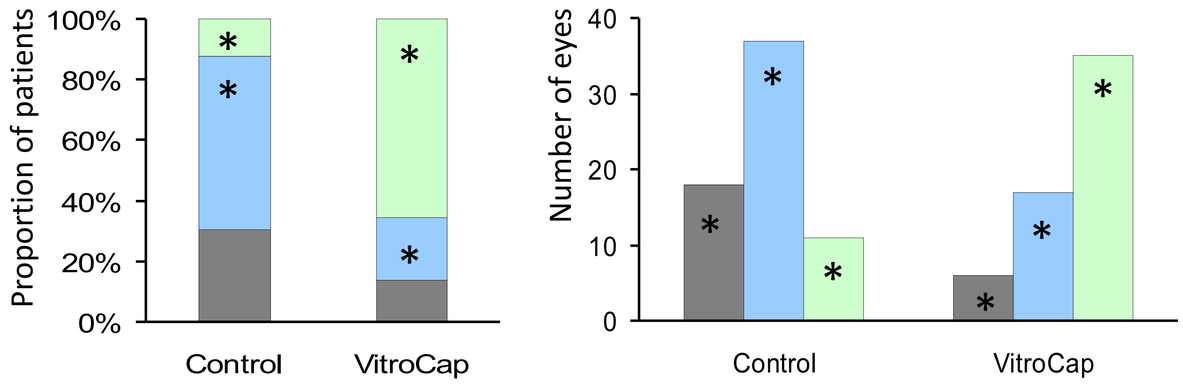
Study 1: n = 24 patients



Symptom improvement during the study.
1 – best; 5 – worst score

Responders to VitroCap after 3 months

Study 2: n = 62 patients



Response to treatment after 3 months (patients) *– p <0.05
At least 1 eye "Better"
"No change"/"1 Better, 1 Worse"
At least 1 eye "Worse"

Response to treatment after 3 months (eyes) *– p <0.05
Better
No change
Worse

An effect of the density of macular carotenoids on the visual perception in the presence of vitreous floaters has not be shown so far.

Conclusion

- Supplementation of vitreous floaters subjects shows a clinically relevant improvement of the condition.
- In a controlled study a significant advantage has been shown over the control group under "watchful waiting".
- This approach establishes an additional effective and safe option for treating vitreous degeneration.
- To prove the therapy of vitreous floaters with oral supplementation of the combination of L-lysine, vitamin C, procyanidines and *Citrus aurantinium* flavonoids a placebo-controlled, multicentric study should be peformed.

Literature:

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2. Gerste RD, Kaercher Th: Pharma-Report. Mit diätetischen Mittel gegen eine lästige visuelle Störung, Z. prakt. Augenheilk. 34: April 2013.