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Age-related macular degeneration: Effects of a short-term intervention with an oleaginous kale extract--a pilot study.

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Author information

Abstract

OBJECTIVE: Age-related macular degeneration (AMD) is a multifactorial degenerative disease of the retina, which accounts for slowly progressive visual impairment in the elderly. An increased dietary intake of xanthophylls is suggested to be inversely related to the risk of macular disease.

METHODS: The present study was designed as a randomized, double-blind, placebo-controlled, parallel trial examining the influence of a short-term intervention with an oleaginous extract of *Brassica oleracea* var. *sabellica* L. (kale) on plasma xanthophyll concentrations and the optical density of the macular pigment xanthophylls (MPOD). Twenty patients with non-exudative AMD were recruited for a 10-wk study period (2-wk run-in, 4-wk intervention, 4-wk washout). All participants received 50 mL of a beverage containing either an oleaginous extract of kale (kale) or refined rapeseed oil (placebo). The verum product provides 10 mg lutein and 3 mg zeaxanthin per day.

RESULTS: The concentrations of the xanthophylls in plasma and the MPOD increased significantly in the kale group after 4 wk of intervention. The successive washout period resulted in a significant decline of the values in plasma and macula. The values at the end of the study were still significantly higher than the initial values. Nevertheless, the improvements did not persist over 4 wk of washout.

CONCLUSION: The distribution of the xanthophylls in the macula seems to be more dynamic than originally assumed.

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KEYWORDS: Kale; Lutein; Maculopathy; Optical density; Zeaxanthin

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