Formulation of a medical food cocktail for Alzheimer's disease: beneficial effects on cognition and neuropathology in a mouse model of the disease.

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Abstract

BACKGROUND: Dietary supplements have been extensively studied for their beneficial effects on cognition and AD neuropathology. The current study examines the effect of a medical food cocktail consisting of the dietary supplements curcumin, piperine, epigallocatechin gallate, α-lipoic acid, N-acetylcysteine, B vitaminsvitamin C, and folate on cognitive functioning and the AD hallmark features and amyloid-beta (Aβ) in the Tg2576 mouse model of the disease.

PRINCIPAL FINDINGS: The study found that administering the medical food cocktail for 6 months improved cortical- and hippocampal- dependent learning in the transgenic mice, rendering their performance indistinguishable from non-transgenic controls. Coinciding with this improvement in learning and memory, we found that treatment resulted in decreased soluble Aβ, including Aβ oligomers, previously found to be linked to cognitive functioning.

CONCLUSION: In conclusion, the current study demonstrates that combination diet consisting of natural dietary supplements improves cognitive functioning while decreasing AD neuropathology and may thus represent a safe, natural treatment for AD.

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