Long-term citicoline (cytidine diphosphate choline) use in patients with vascular dementia: neuroimaging and neuropsychological outcomes.

Cohen RA, Browndyke JN, Moser DJ, Paul RH, Gordon N, Sweet L.

Abstract

BACKGROUND: Cytidine diphosphate choline (citicoline) has been previously shown to have efficacy in reducing the functional impairments associated with acute stroke. Citicoline is thought to have neuroprotective benefits and has been used for the treatment of chronic cerebrovascular disorders, though its effectiveness has not been fully tested. This randomized, double-blind clinical trial was conducted to determine whether daily citicoline treatment improves neurocognitive and neuroimaging outcome over 12 months among patients diagnosed with vascular dementia (VaD).

METHODS: 30 patients diagnosed with VaD, based upon NINDS-AIREN and DSM-IV criteria, were randomized and treated with either 500 mg of citicoline or placebo twice per day. Patients were assessed at baseline, and at 6, and 12 months on a battery of neurocognitive tests. Neuroimaging measures of total brain volume and subcortical/periventricular hyperintensity (SH) volume on magnetic resonance imaging (MRI) were collected at baseline and the 12-month follow-up.

RESULTS: The citicoline and placebo treatment groups did not differ in their neuropsychological performance at baseline and the 12-month follow-up. Significant declines in neuropsychological performance were noted, as well as significantly increased SH and reduced total brain volumes on MRI for both groups at the 12-month follow-up.

CONCLUSIONS: The efficacy of long-term citicoline treatment for cognitive impairment and neuropathological decline in those patients already meeting criteria for VaD does not appear to be substantiated by the current study.

Copyright 2003 S. Karger AG, Basel

PMID: 12865605 DOI: 71116

[PubMed - indexed for MEDLINE]