

Abstract

World J Biol Psychiatry. 2010 Jun 29. [Epub ahead of print]

Clinical correlates of low serum carnitine levels in hospitalized psychiatric patients.

Cuturic M, Abramson RK, Moran RR, Hardin JW, Hall AV.

South Carolina Department of Mental Health and Department of Neuropsychiatry and Behavioral Science, University of South Carolina School of Medicine, Columbia, SC, USA.

OBJECTIVE: We sought to evaluate clinical correlates of low serum carnitine levels in hospitalized psychiatric patients.

METHODS: We retrospectively reviewed the charts of 40 psychiatric inpatients identified to have low serum carnitine levels.

RESULTS: Cognitive impairment was present in 38 (95%) cases, frequently accompanied by imbalance, agitation and extrapyramidal symptoms. Valproate therapy was encountered in 28 (70%) patients. The dosage of valproate negatively correlated with total and free carnitine levels ($P = 0.003$ and 0.0136). Polypharmacy also affected carnitine levels, indicating additional modulatory effects on carnitine metabolism. We encountered a disproportionately high prevalence of mental retardation and dementia in association with hypocarnitinemia.

CONCLUSION: We hypothesize that in the context of mental illness hypocarnitinemia may be associated with metabolic encephalopathy and cognitive impairment. As carnitine deficiency is a potentially treatable condition further studies are warranted.

PMID: 20586533

