Abstract

Pharmacol Rep. 2005 Nov-Dec;57(6):713-8.

Zinc and depression. An update.

Nowak G, Szewczyk B, Pilc A.

Department of Cytobiology and Histochemistry, Collegium Medicum, Jagiellonian University, Medyczna 9, PL 30-688 Kraków, Poland.

BACKGROUND: Unsatisfactory clinical efficacy and a variety of adverse effects of current antidepressant drugs have incited search for better therapy. Zinc, an antagonist of the glutamate/N-methyl-D-aspartate (NMDA) receptor, exhibits antidepressant-like activity in rodent tests/models of depression. Similarly to antidepressants, zinc induces brain derived neurotrophic factor (BDNF) gene expression and increases level of synaptic pool of zinc in the hippocampus.

RESULTS: Clinical observations demonstrated serum hypozincemia in depression, which was normalized by effective antidepressant treatment. Moreover, our preliminary clinical study demonstrated the benefit of zinc supplementation in antidepressant therapy.

CONCLUSION: All the data indicate the important role of zinc homeostasis in psychopathology and therapy of depression and potential clinical antidepressant activity of this ion.

PMID: 16382189

FREE FULL TEXT