Reduced potency of zinc to interact with NMDA receptors in hippocampal tissue of suicide victims.

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Zinc is involved in both psychopathology and treatment of depression. Since a considerable percentage of suicide victims had suffered from depression, we hypothesized that alteration in zinc homeostasis might occur in their brain tissue. We now report that zinc content is not altered in the hippocampal or cortical tissue of suicide victims (n = 10) compared to age-matched controls (n = 10). However, there is a statistically significant 26% decrease in the potency (increase in the IC₅₀ value) of zinc to inhibit [³H]MK-801 binding to NMDA receptors in the hippocampal but not cortical tissue of suicide subjects. The data represent the first demonstration that the alteration in zinc interaction with NMDA receptors may be involved in psychopathology underlying suicidal attempts.

Key words: zinc, NMDA receptors, hippocampus, cortex, human, suicide

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PRELIMINARY COMMUNICATION

REDUCED POTENCY OF ZINC TO INTERACT WITH NMDA RECEPTORS IN HIPPOCAMPAL TISSUE OF SUICIDE VICTIMS

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