

Abstract

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Lower serum zinc in major depression is a sensitive marker of treatment resistance and of the immune/inflammatory response in that illness.

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OBJECTIVE: The aims of the present study were to examine i) serum zinc (Zn) and copper (Cu) in treatment resistant depression (TRD); ii) the effects of subchronic antidepressant therapy on these trace elements; and iii) the relationships between serum Zn and Cu and immune/inflammatory markers.

RESULTS: Serum Zn was significantly lower in TRD than in normal controls. There was a significant inverse correlation between baseline serum Zn and staging of depression based on severity of prior treatment resistance. There were no significant effects of antidepressive treatment on serum Zn, whereas serum Cu was significantly reduced. There were highly significant correlations between serum Zn and the CD4+/CD8+ T-cell ratio (negative), and total serum protein, serum albumin, and transferrin (all positive).

CONCLUSIONS: The results suggest that lower serum Zn is a marker of TRD and of the immune/inflammatory response in depression. It is suggested that treatment resistance may bear a relationship with the immune/inflammatory alterations in major depression.

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