

Abstract

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Effects of zinc and ferritin levels on parent and teacher reported symptom scores in attention deficit hyperactivity disorder.

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OBJECTIVE: It has been suggested that both low iron and zinc levels might be associated with Attention Deficit Hyperactivity Disorder (ADHD) symptoms. However, the association of zinc and iron levels with ADHD symptoms has not been investigated at the same time in a single sample.

METHOD: 118 subjects with ADHD (age = 7-14 years, mean = 9.8, median = 10) were included in the study. The relationship between age, gender, ferritin, zinc, hemoglobin, mean corpuscular volume and reticulocyte distribution width and behavioral symptoms of children and adolescents with ADHD were investigated with multiple linear regression analysis.

RESULTS: Results showed that subjects with lower zinc level had higher Conners Parent Rating Scale (CPRS) Total, Conduct Problems and Anxiety scores, indicating more severe problems. CPRS Hyperactivity score was associated both with zinc and ferritin levels. Conners Teacher Rating Scale (CTRS) scores were not significantly associated with zinc or ferritin levels.

CONCLUSIONS: Results indicated that both low zinc and ferritin levels were associated with higher hyperactivity symptoms. Zinc level was also associated with anxiety and conduct problems. Since both zinc and iron are associated with dopamine metabolism, it can be speculated that low zinc and iron levels might be associated with more significant impairment in dopaminergic transmission in subjects with ADHD.

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