Levels of Zinc, Magnesium and Iron in Children with Attention Deficit Hyperactivity Disorder

Shahida A Khan


Abstract

Background:
Attention deficit hyperactivity disorder is a common multifactorial and complex neuro developmental disorder often persisting through adolescence and adulthood. Indications of nutritional treatments with omega-3 fatty acids, and minerals like zinc, magnesium, iron, etc. are gaining importance. We therefore sought to estimate, and compare the mineral content of zinc, magnesium, and iron in the plasma of ADHD diagnosed children with normal non-ADHD children, and establish a correlation if any with the disorder symptoms.

Methods and findings:
Psychiatric evaluation was performed using the Diagnostic and Statistical Manual IV and plasma elemental analysis using atomic absorption spectrophotometry. Low levels of zinc, magnesium and iron were observed in ADHD children when compared to their healthy controls.

Conclusion:
Children with ADHD exhibit lower concentrations of plasma zinc, magnesium, and iron as compared to normal controls which could be correlated with the disorder symptoms in ADHD.