

Homocysteine, Pyridoxine, Folate and Vitamin B12 Levels in Children with Attention Deficit Hyperactivity Disorder

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Abstract

BACKGROUND:

In our study, we aimed to evaluate the serum homocysteine levels, pyridoxine, folate and vitamin B12 levels in children with attention deficit hyperactivity disorders (ADHD).

SUBJECTS AND METHODS:

This study included 30 newly diagnosed drug-naive children with ADHD (23 males and 7 female, mean age 9.3 ± 1.8 years) and 30 sex-and age matched healthy controls. The diagnosis of ADHD was made according to DSM-V criteria. Children and adolescents were administered the Schedule for Affective Disorders and Schizophrenia for School Aged Children, Present and Lifetime Version, the Conners' Parent Rating Scale-Revised, Long Form, the Conners' Teacher Rating Scale and the Wechsler Intelligence Scale for Children Revised (WISC-R) for all participants. Homocysteine, pyridoxine, folate and vitamin B12 levels were measured with enzyme-linked immunosorbent assay.

RESULTS:

Homocysteine, pyridoxine, folate and vitamin B12 levels were significantly lower in children with ADHD compared with their controls ($p < 0.05$). A positive significant correlation was observed between the all WISC-R scores and vitamin B12 level in patients ($r = 0.408$, $p = 0.025$).

CONCLUSIONS:

The results obtained in this study showed that reduced homocysteine, pyridoxine, folate and vitamin B12 levels could be a risk factor in the etiology of ADHD.