The probable role of adrenomedullin and nitric oxide in childhood attention deficit hyperactivity disorder.

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Abstract

BACKGROUND:
The role of adrenomedullin hormone, which has been shown to be associated with many psychiatric disorders, in the etiology of ADHD and its relation to disease is not yet known.

AIM:
In this study, it was aimed to compare plasma adrenomedullin and nitric oxide (NO) levels of newly diagnosed, treatment-naive patients with ADHD with healthy children.

METHODS:
A total of 45 children with ADHD and 45 healthy children were included. The Schedule for Affective Disorders and Schizophrenia Present and Lifetime Version (K-SADS), a semi-structured interview, was applied to all cases by the child and adolescent psychiatrist. Age and gender-matched participants who admitted to the hospital for any other reasons without any psychiatric diagnosis according to K-SADS were selected as a control group. Sociodemographic data form and The Turgay DSM-IV-Based Child and Adolescent Disruptive Behavioral Disorders Screening and Rating Scale-parental form were applied to the all groups. NO, and adrenomedullin levels were analyzed by ELISA method with specific commercial kits.

RESULTS:
There was no statistically significant difference in NO and adrenomedullin levels, neither between the groups nor ADHD subtypes. A positive correlation between adrenomedullin and NO levels was found in both the case (r = 0.659) and the control groups (r = 0.494).

CONCLUSIONS:
Besides being the first study to evaluate adrenomedullin levels to elucidate the etiology of childhood ADHD as well as NO, significant differences were not found between the case and the control groups in terms of NO and adrenomedullin levels.