Association between altered lipid profiles and attention deficit hyperactivity disorder in boys.

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Abstract

BACKGROUND:
Attention-deficit/hyperactivity disorder (ADHD) is a neurodevelopmental disorder, which is multifactorial, complex, and seen most commonly in childhood.

AIMS:
The aim of this study was to examine the hypothesis that altered serum lipid profiles are associated with ADHD.

METHODS:
The study inluded 32 boys diagnosed with ADHD according to DSM-IV-R criteria and a control group of 29 healthy subjects. All patients were assessed with The Kiddie Schedule for Affective Disorders and Schizophrenia Present and Lifetime Version, the Turgay DSM-IV-based Disruptive Behavior Disorders Child and Adolescent Rating and Screening Scale, the Conners Parent Rating Scale-Revised Long Form, and the Conners Teacher Rating Scale. Measurements were taken of fasting plasma total cholesterol (T-Chol), triglyceride (TG), high-density lipoprotein cholesterol (HDL-C), low-density lipoprotein cholesterol (LDL-C), and 1-day food intake levels, and the groups were compared.

RESULTS:
The mean TC, LDL, and HDL levels were significantly lower in the ADHD group than the control group ($p = .005$, $p < .001$, $p = .002$, respectively). There was no significant difference between the groups' TG levels ($p = .295$). No significant differences were determined between the combined-type ADHD patients and the predominantly inattentive subtype of ADHD in respect to the lipid profile.

CONCLUSION:
The results of this study add to the growing body of evidence indicating an association between serum cholesterol and ADHD in boys. Further genetic and molecular studies are required to elucidate the biochemical mechanisms underlying this relationship.