Nutritional Status of Korean Children and Adolescents with Attention Deficit Hyperactivity Disorder (ADHD)

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Clin Nutr Res. 2017 Apr;6(2):112-121. DOI: https://doi.org/10.7762/cnr.2017.6.2.112

Abstract

Attention deficit hyperactivity disorder (ADHD) has been associated with an elevated risk for obesity but this seems to be paradoxical to the fact that many youths with ADHD have symptoms of hyperactivity. People diagnosed with ADHD tend to have a high risk of developing undesirable diet habits and consequently have health related problems. However, less attention has been paid to obesity in ADHD while many efforts have been devoted to the prevention of childhood obesity in mentally normal people. Hence the purpose of this study was to explore the nutritional status and life habits of children and adolescents with ADHD (n = 76) based on the degree of obesity by utilizing the Korean National Health and Nutrition Examination Survey (KNHANES) data from 2005–2013. As results, the levels of blood pressure, total triglycerides and the fat intake relative to total energy intake in overweight ADHD group were higher than those in normal weight group. Interestingly, overweight ADHD subjects consumed significantly less amount of iron compared to normal weight ADHD subjects and the level of serum ferritin was lower in the overweight ADHD group (59.0 ng/mL) than in the normal weight ADHD group (47.9 ng/mL). After adjusting total energy intake, total vegetable consumption was 14.3% lower in overweight group compared to the consumption in normal weight group. These results indicate a plausible relationship between iron status and obesity in ADHD subjects but this relationship may not be specific to ADHD. A future study with the case-control design is necessary to investigate the association of obesity, nutrient intake, and cognitive/mental status of ADHD.