Association of Attention Deficit Hyperactivity Disorder and Autism Spectrum Disorders with Mean Platelet Volume and Vitamin D.

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Abstract

BACKGROUND
The purpose of this study was to assess the values of the mean platelet volume (MPV) in children with attention deficit hyperactivity disorder (ADHD) and with autism spectrum disorders (ASDs) to determine the risk of cardiovascular disease in these 2 disorder groups.

MATERIAL AND METHODS
The study included a total of 79 patients with ADHD or ASDs and controls in the Van region of Turkey. The control group included subjects of matching age and sex with no ADHD, ASDs, or chronic disease and taking no vitamins. The haematological parameters of the patients, including MPV, vitamin B12, and vitamin D, were assessed.

RESULTS
The study included a total of 79 children and adolescents aged 2-18 years (32 females and 47 males). Of the patients, 36 were in the ADHD group, 18 in the ASDs group, and 25 in the control group. There was no statistically significant difference in haematological parameters between the groups, but there were significant differences in terms of vitamin D and vitamin B12. The patient groups showed lower levels of vitamin B12 and vitamin D. In the ADHD group, there was a negative correlation between both vitamins and MPV (p<0.05). Partial correlation analysis of the ADHD group showed that MPV, in particular, was negatively correlated to vitamin D, and not to vitamin B12 (p: 0.03).

CONCLUSIONS
Both ADHD and ASDs may accompany increased risk for cardiovascular disease due to the presence of vitamin B12 and D deficiency and their own characteristics. Therefore, these disorders should be closely followed up.