The relationship between the SNAP-25 polymorphism and omission errors in Korean children with attention deficit hyperactivity disorder

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Abstract

Objective: This study aimed to investigate the association between the synaptosomal-associated protein 25 kDa (SNAP-25) genotype and performance on the continuous performance test (CPT) in Korean children with attention-deficit/hyperactivity disorder (ADHD).

Methods: 87 children with ADHD (mean age = 9.23 ± 1.99 years) participated in this study. Omission errors, commission errors, reaction time, and reaction time variability on the CPT were analyzed. The single-nucleotide polymorphism (SNP) rs3746544 (1065 T > G) of SNAP-25 was genotyped to examine the association with CPT performance.

Results: We found significantly more omission errors on the CPT among children with the TT genotype of SNAP-25 (t = 2.56, p = 0.012) after correcting for multiple testing.

Conclusion: Our results suggest the possible involvement of the SNAP-25 1065 T > G polymorphism in the inattention phenotype in children with ADHD. Further studies with more refined neuropsychological measures and much larger sample sizes are needed to confirm our findings.