

P02-211

THE -1021C/T POLYMORPHISM OF THE DOPAMINE- β -HYDROXYLASE (DBH) GENE PROMOTER AFFECTS PERSONALITY TRAITS IN HEALTHY SUBJECTS

M. Kamata¹, A. Suzuki², Y. Matsumoto², N. Shibuya², H. Togashi¹, K. Otani²

¹Health Administration Center, Yamagata University, ²Department of Psychiatry, Yamagata University School of Medicine, Yamagata, Japan

Introduction: Dopamine and norepinephrine are implicated in the characterization of personality traits. Dopamine- β -hydroxylase (DBH) is the enzyme responsible for conversion of dopamine to norepinephrine. Previous studies have shown that the -1021C/T polymorphism of the DBH gene promoter influences plasma DBH activity. Few studies investigated the association between this polymorphism and personality traits.

Aim: To examine the association between the -1021C/T DBH polymorphism and personality traits in healthy volunteers.

Methods: The participants were 627 Japanese unrelated volunteers. The subjects with present psychiatric disorders or past history of psychiatric disorders according to the DSM-IV were excluded. The DBH genotypes were identified by a PCR-RFLP method, and personality traits were assessed by the Temperament and Character Inventory (TCI). The study protocol was approved by the Ethics Committee of Yamagata University School of Medicine, and all subjects provided written informed consent to participate.

Results: In the two-factor analysis of covariance with the DBH genotype and sex as factors and with age as a covariate, there was no main effect of the DBH genotype on any TCI score, while the interaction between the factors was significant in harm avoidance. In the post-hoc analysis, the group with the T allele predictive of lower DBH activity had higher scores of harm avoidance than that without the T allele in females ($p=0.006$), but not in males.

Conclusion: The present study suggests that the -1021C/T DBH polymorphism affects the personality trait of harm avoidance in healthy females.