

POSTER PRESENTATION

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BDNF gene polymorphism RS2049046 in episodic and chronic migraine

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Background

The brain-derived neurotrophic factor (BDNF) is closely involved in the pathophysiology of mood disorders and pain processing. An increased risk for the AT-genotype of rs2049046 in BDNF gene and the GC-genotype of rs1553005 in CGRP gene was previously reported in migraine patients.

Aim

The aim of the study was to investigate the prevalence of BDNF gene polymorphism rs2049046 in chronic and episodic migraine.

Patients and methods

117 patients with migraine (ICHD II), 12 men and 105 women, mean age 40.7 ± 12.1 y.o. were included. 78 patients had episodic migraine (EM) and 39 had chronic migraine (CM). SNP rs2049046 was genotyped by PCR-RLFP technique: PCR with "GenPakTM PCR Core" (Isogene Laboratory, Ltd) and restriction with HinfI (SibEnzyme Ltd).

Results

The prevalence of TT genotype of rs2049046 was significantly higher in CM group (20.5%) compared with EM group (6.4%), $p=0.022$. The prevalence of AA (8.9% in EM group and 7.7% in CM group) and AT genotypes (84.6% in EM group and 71.8% in CM group) did not differ significantly.

Conclusions

TT genotype of rs2049046 in BDNF gene appears to influence susceptibility to migraine chronification. This polymorphism could also be a link for comorbidity of chronic migraine and mood disorders.

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Reference

1. Lemos C, Mendonca D, Pereira-Monteiro J, et al: BDNF and CGRP interactions: implications in migraine susceptibility. *Cephalalgia* 2010, **30**:1375-1382.

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