

P-1446 - ANALYSIS OF POLYMORPHISMS IN REELIN GENE IN SUICIDE VICTIMS

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Introduction: Suicide is a complex phenomenon, an outcome of environmental, genetic, and epigenetic factors. Proteins, like reelin, involved in important processes in brain plasticity, cell-cell interactions, synaptogenesis, and in neuron migration, seem to be interesting candidate genes for study of suicide.

Objectives: Many studies have shown associations of reelin gene with different mental disorders, which are often implicated in suicidal behaviour, however there are no studies performed on suicide explicitly.

Aims: Determination of association of suicide and three single nucleotide polymorphisms (SNPs) in reelin gene (rs2965087, rs7341475, and rs362691).

Methods: We performed qRT-PCR (Real-Time Polymerase Chain Reaction) genotyping analysis of SNPs and alcohol analysis on 396 suicide victims and 211 controls. Statistical analysis of genotype and allele frequency distributions between groups of suicide victims and controls was performed. There was additional analysis of different subgroups (e.g. male, female, violent and non-violent suicide).

Results: In case of functional polymorphism rs7341475 (Val997Leu) we observed statistically significant lower frequency of common allele G in female suicide victims relative to female controls. Contradictory, in male suicide victims we observed higher polymorphic allele A relative to male controls, but it was statistically insignificant. Analysis of other two polymorphisms gave no statistically significant results.

Conclusions: Present investigation confirmed association between rs7341475 in reelin gene and female suicide victims in Slovenian population. This result showed that reelin gene is an important candidate gene for further investigations in association with suicidal behaviour.