

P-707 - POPULATION DISTRIBUTION OF THE SEROTONIN TRANSPORTER GENE POLYMORPHISMS

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Introduction: Serotonin transporter 5-HTT plays an important role in serotonergic transmission. Three polymorphisms, an insertion/deletion and SNP in the promoter region and a variable nucleotide tandem repeat (VNTR) in intron 2, influence expression of the 5-HTT gene. These polymorphisms can contribute to the etiology of many psychiatric disorders. Associations between a functional variant in the serotonin transporter anxiety-related personality traits were found, as well as the risk of developing depression, alcoholism or suicidal behavior.

Aims: The aim of the study was to find possible differences in distribution of variants in three age groups of population.

Methods: We examined three polymorphisms at the serotonin transporter protein locus (SLC6A4) in free specific and representative cohorts drawn from the Czech population. These cohorts were stratified according to their age: group A - randomly selected elderly individuals (over 75 years of age), group B young adults in reproductive age (age ranging between 19- 45 years) and c) group C - newborns, all with balanced gender representation.

Results and conclusions: Analysis revealed that elderly individuals were statistically more likely than to carry two copies of the L allele of the length polymorphism. This may be due to the protective character of L allele, which is associated with lower susceptibility to bipolar affective disorder, depression, alcohol dependence and neuroticism and can be associated with good mental health and length of living.