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GENETIC RISK FACTORS FOR INTERFERON-INDUCED ANXIETY

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Background/aims: Interferon-alpha (IFN-α) and Ribavirin is the recommended treatment for chronic hepatitis C (CHC). Common treatment side-effects include neuropsychiatric symptoms such as anxiety, which impairs patient's quality of life and treatment adherence. Inflammation and neurotransmission systems may play a role in the pathogenesis of IFN-α-induced anxiety. The GC/GG genotype at a polymorphism located in the interleukin-6 synthesizer gene (IL6 gene) has been related with a higher production of IL-6 and “higher inflammation response”. A polymorphism in the serotonin transporter gene (SERT) has been related with anxiety and antidepressant response. The aim of the study was to assess the role of IL6 and SERT polymorphisms as predictive variables of IFN- induced anxiety.
Material/methods: A cohort of 385 Caucasian outpatients with CHC initiating antiviral treatment. Patients were euthymic and without current anxiety disorder (SCID) at baseline. Anxiety evaluation: Hospital anxiety and depression scale. Assesment: Baseline, 4, 12, 24, and 48 weeks after antiviral treatment initiation. DNA was extracted and polymorphisms genotyped. Hardy-Weinberg equilibrium: IL-6 (p=0.72) and SERT (p=0.41). Statistical analysis: linear mixed-effects.
Results: Patients carrying the G allele (GC/GG genotype) of IL6 polymorphism (G vs. CC) had more anxiety symptoms (p=0.004) during antiviral treatment. We did not find a significant effect of SERT (S vs. LL) on anxiety (p=0.15). No significant interaction between both genes was reported.
Conclusion: GC/GG genotype, that implies higher seric concentrations of IL6, predicts interferon-α-induced anxiety supporting a role of inflammatory pathway on pathophysiology of anxiety.
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