

P-808 - THE INTERACTION BETWEEN COMT AND BDNF VARIANTS INFLUENCES OBSESSIVE-COMPULSIVE-RELATED DYSFUNCTIONAL BELIEFS

P.Alonso¹, C.Lopez-Sola¹, M.Grañados^{1,2,3,4}

¹Psychiatry, ²Hospital de Bellvitge, Hospitalet de Llobregat, ³Center for Genomic Regulation, Barcelona, Spain, ⁴Institute of Psychiatry, King's College London, London, UK

Introduction: Contemporary cognitive models emphasize the importance of certain dysfunctional beliefs in the development and maintenance of Obsessive-Compulsive Disorder (OCD): overimportance of thoughts, need to control thoughts, perfectionism, intolerance of uncertainty, inflated responsibility, and overestimation of threat. Although a recent twin study suggests that these dysfunctional beliefs are significantly heritable, there have been no previous attempts to analyze candidate genes associated with them.

Objectives: Our study aimed to investigate the possible association between OC-related dysfunctional beliefs and variants of two functional polymorphisms of the *COMT* (Val158Met) and *BDNF* (Val66Met) genes in 141 OCD patients.

Methods: The non-synonymous mutation Val158Met (rs4680) in the *COMT* gene and the Val66Met functional variant (rs6265) in the *BDNF* gene were genotyped with the KASPar assay system. The validated Spanish short version of the Obsessive Beliefs Questionnaire, (OBQ-44), was used to assess dysfunctional beliefs. Multivariate analysis of covariance (MANCOVA) and a post hoc one-way analysis of covariance (ANCOVA) were performed.

Results: Variability in dysfunctional beliefs was not affected by the *COMT* or *BDNF* genotype when examining the two genes in isolation, but we detected a significant *COMT* x *BDNF* interaction effect on responsibility and overestimation of threat scores. These cognitive distortions were significantly higher among OCD subjects with the *BDNF* Met-present genotype who were also carriers of the *COMT* Val/Met and Met/Met genotypes.

Conclusions: Our data suggest that an interaction between dopaminergic and neurotrophic functional gene variants influences some of the dysfunctional belief domains hypothesized to contribute to the etiology of OCD.