

P-221 - ASSOCIATION BETWEEN MICRORNA-206 GENE POLYMORPHISMS AND BIPOLAR DISORDER IN THE HAN CHINESE POPULATION

Z.Wang^{1,2}, S.Yu³, J.Chen¹, Z.Li¹, J.Huang¹, C.Yuan¹, W.Hong¹, D.Peng¹, Z.Wu¹, Y.Fang¹

¹Division of Mood Disorders, Shanghai Mental Health Center, Shanghai Jiao Tong University School of Medicine, ²Department of Psychiatry, Hongkou District Mental Health Center of Shanghai, ³Department of Genetics, Shanghai Mental Health Center, Shanghai Jiao Tong University School of Medicine, Shanghai, China

Introduction: Bioinformatic investigations indicate that has-mir-206 (microRNA-206, miRNA-206) could regulate BDNF protein synthesis by interfering with BDNF mRNA translation, which is disrupted in bipolar disorder (BPD).

Objectives: This study is to investigate whether miRNA-206 gene variants were associated with BPD susceptibility in a Han Chinese population.

Methods: 342 patients who met DSM-IV criteria for bipolar disorder type I (BPD-I) or type II (BPD-II) and 386 matched health controls were enrolled into this study. The miRNA-206 gene and +/-500bp were selected for gene sequencing. For the case-control genetic comparisons, differences in the genotype and allele distributions between patients and controls were examined using Pearson's χ^2 test.

Results: Gene sequencing showed that there are two polymorphisms rs16882131(C/T) and rs62408583 (A/C) located at the upstream of miRNA-206 gene, which are complete linkage disequilibrium. The association analysis showed that there was no significant difference for genotype frequencies ($\chi^2=2.075$, $df=2$, $P=0.354$) or for allele frequencies ($\chi^2=0.041$, $df=1$, $P=0.839$) between BPD patients and controls. Similarly, no significant difference was found between BPD-I patients and controls (genotype $\chi^2=1.411$, $df=2$, $P=0.494$; allele $\chi^2=0.380$, $df=1$, $P=0.538$). However, there was significant difference between BPD-II patients and controls (genotype $\chi^2=7.933$, $df=2$, $P=0.019$; allele $\chi^2=5.403$, $df=1$, $P=0.020$).

Conclusions: Our findings do not support that BPD susceptibility was associated with miRNA-206 gene polymorphisms in the studied Han Chinese population. The association between miRNA-206 gene polymorphisms and bipolar disorder type II is needed to be carefully interpreted. Further studies are necessary to elucidate the involvement miRNA-206 in the pathophysiology of BPD.