Nonsynonymous polymorphisms of the PDLIM5 gene association with the occurrence of both bipolar disorder and schizophrenia

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Abstract

Two single nucleotide polymorphisms of \textit{PDLIM5}, rs7690296 and rs11097431, were genotyped using Mass-Array SNP genotyping by Sequenom technology in 244 bipolar disorder patients, 471 schizophrenia patients, and 601 control individuals who were Malay, Chinese, and Indian ethnic groups in the Malaysian population. A significant association was observed in allele frequency between the rs7690296 polymorphism and bipolar disorder in the Indian ethnic group \( [P=0.02, \text{adjusted odds ratio (OR)} 0.058, 95\% \text{ confidence interval (CI)} 0.36–0.93] \). A significant association was also observed between the rs7690296 polymorphism and schizophrenia under the recessive model for both Malay \( (P=0.02, \text{adjusted OR} 1.86, 95\% \text{ CI} 1.12–3.10) \) and Indian \( (P=0.02, \text{adjusted OR} 1.92, 95\% \text{ CI} 1.10–3.37) \) ethnic groups. However, no association was detected between the rs11097431 polymorphism either with bipolar disorder or with schizophrenia. Therefore, it can be deduced that the nonsynonymous rs7690296 polymorphism could play an important role in the pathophysiology of both bipolar disorder and schizophrenia.

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