

## The Role of ALDH2 Genotypes in Bipolar II Disorder Comorbid with Anxiety Disorder

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**Abstract :** Dopamine, metabolized to 3,4-dihydroxyphenylacetic acid (DOPAC) by aldehyde dehydrogenase 2 (ALDH2), ALDH2\*1/\*1, and ALDH2\*1/\*2+ALDH\*2/\*2 equally carried in Han Chinese. The relationship between dopamine metabolic enzyme and cognitive performance in bipolar II disorder comorbid with anxiety disorder (AD) remains unclear. This study proposed to explore the association between ALDH2 polymorphisms, anxiety comorbidity in bipolar II disorder. One hundred and ninety-seven BPII with or without AD comorbidity were recruited and compared with 130 Health controls (HC). A polymerase chain reaction and restriction fragment length polymorphism analysis was used to determine genotypes for ALDH2, and neuropsychological battery was performed. Two factor analyses with AD comorbidity and ALDH2 showed a significant main effect of ALDH2 on attention and marginally significant interaction between AD and ALDH2 memory performance. The ALDH2 polymorphisms may play a different role in the neuropsychological performance on varied neuropsychological performance in BPII comorbid with and without AD.

**Keywords :** anxiety disorder, bipolar II disorder, comorbidity, genetic

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