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Role of *ADH1B* rs1229984 and *ALDH2* rs671 gene polymorphisms in the development of Alzheimer's disease

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ABSTRACT. In the present study, we investigated the association between *ADH1B* rs1229984 and *ALDH2* rs671 polymorphisms and the development of Alzheimer's disease in a Chinese population. Genotyping of the *ADH1B* rs1229984 and *ALDH2* rs671 polymorphisms was carried out by polymerase chain reaction-restriction fragment length polymorphism. Logistic regression analyses revealed that the AA genotype of *ADH1B* rs1229984 was associated with an increased risk of Alzheimer's disease (OR = 2.54, 95%CI = 1.19-5.41). In addition, *ADH1B* rs1229984 was also associated with elevated risk of Alzheimer's disease in both dominant (OR = 1.78, 95%CI = 1.09- 2.93) and recessive (OR = 2.33, 95%CI = 1.18-4.57) models. For *ALDH2* rs671, the AA genotype was correlated with an increased risk of Alzheimer's disease as compared to the GG genotype (OR = 4.57, 95%CI = 1.60-14.01). The *ALDH2* rs671 polymorphism was associated with Alzheimer's in both dominant (OR = 1.79, 95%CI = 1.08-2.97) and recessive (OR = 4.17, 95%CI = 1.49-12.67) models. In conclusion, we observed that

ADH1B rs1229984 and *ALDH2* rs671 polymorphisms increased the risk of Alzheimer's disease in all the genetic models.

Key words: *ADH1B*; *ALDH2*; Polymorphism; Alzheimer's disease

