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# The role of OLR1 polymorphisms in determining the risk and prognosis of ischemic stroke in a Chinese population

Jianli Zhang [1], Changhao Yin, Yu Zhang, Libo Zhao, HongJuan Fu, Jiachun Feng

Affiliations + expand

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## Abstract

**Aim:** To explore the role of rs11053646 polymorphism of oxidized low-density lipoprotein receptor 1 (OLR-1) gene in the susceptibility and prognosis of ischemic stoke (IS).

**Methods:** A total of 304 IS patients and 377 age and sex-matched healthy controls were recruited. Patients were followed up for 6 months for recovery evaluation of stroke. Genotyping analyses of the rs11053646 G > C polymorphisms of OLR1 gene were performed.

**Results:** The genotype frequencies and alleles frequencies at rs11053646 were significantly differed between stroke subjects and control subjects (both $P < 0.001$). The presence of CC genotype was significantly higher in IS subjects than in controls (38% vs. 25%, $P = 0.001$). Similarly, the C allele carriage in IS was significantly higher than controls (59% vs. 49%, $P < 0.001$). Regression analysis showed the CC homozygote had a significantly increased risk for stroke (adjusted OR = 2.080; $P = 0.001$). The genotype of rs11053646 were not associated with the IS subtype and severity at admission, but determine the clinical outcome at 6 months after discharge from hospital.

**Conclusion:** The rs11053646 polymorphism of OLR1 gene be used as a molecular marker for the susceptibility and prognosis of IS in Chinese population.