Association between the interleukin-1β gene -511C/T polymorphism and ischemic stroke: an updated meta-analysis

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ABSTRACT. Numerous studies have investigated the relationship between the interleukin-1β gene (IL1B) -511C/T polymorphism and ischemic stroke (IS) risk. However, the results are inconsistent. We performed this meta-analysis of all available case-control studies that evaluated the relationship between the IL1B -511C/T polymorphism and IS. Studies were retrieved from the PubMed and Embase databases. Statistical analyses were conducted using the STATA 11.0 software. Odds ratios (ORs) with 95% confidence intervals (95%CIs) were applied to determine the strength of association. Nine studies comprising a total of 2072 patients and 2173 controls were included. No significant variation in IS risk was detected in any of the genetic models (CC vs TT: OR = 0.78, 95%CI = 0.48-1.27; CT vs TT: OR = 0.83, 95%CI = 0.62-1.10; dominant model: OR = 0.79, 95%CI = 0.55-1.15; recessive model: OR = 0.90, 95%CI = 0.66-1.24). Taking into account the effects of race, further subgroup analyses were performed and our results showed no association between the IL1B gene -511C/T polymorphism and IS in either Asians or Caucasians. No publication
bias was found in our study. In conclusion, the *IL1B* gene -511C/T polymorphism might not be associated with IS risk.

**Key words:** -511C/T polymorphism; Ischemic stroke; Interleukin-1β