A Matched Case-Control Study of Factor XIII gene polymorphism with Cerebral Infarction

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G to T point mutation (Val 43 Leu) of factor XIII(FXIII) in exon 2 of the alpha subunit of the FXIII is common and this has protective effects against myocardic infaction and venous thromosis, the association between FXIII and ischemic stroke has not been reported clearly. Furthermore, there were few studies on interaction between FXIII and plasminogen activator inhibitor-1 (PAI-1) gene polymorphism on ischemic stoke. Thus, an age and sex matched case-control study was designed to evaluate the protective role of FXIII Val 43 Leu and combinded gene effects on the cerebral stroke. The genotype for FXIII was determined using single stranded conformation polymorphism. Conditional logistic model was applied. No significant association between FXIII and stroke was observed in crude analysis. In multiple conditional logistic regression, FXIII was borderlinely related to cerebral stoke (adjusted OR=2.86, P=0.069). No significant interaction between two genes was observed. Our findings, thus, suggested that Factor XIII gene may be associated with cerebral stroke, regardless of TPA-1.

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