

人类与医学遗传学

促炎基因ALOX5AP基因多态性与脑卒中的相关性研究

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摘要

白三烯是作用较强的促炎症因子, 在动脉粥样硬化的发生发展中发挥着重要作用。5-脂氧合酶激活蛋白是白三烯合成的关键调控因素, 通过全基因组扫描的连锁分析和关联分析发现编码5-脂氧合酶激活蛋白的基因ALOX5AP在白种人中与心肌梗塞和脑卒中的患病风险相关。然而, 目前尚无关于该基因与亚洲人脑卒中患病风险的遗传学资料。本研究探讨了ALOX5AP基因多态性与脑卒中及其亚型易感性的关系。采用PCR-RFLP方法, 对来自7个临床中心的1 713名对照和1 773名脑卒中患者检测了ALOX5AP基因的4个SNPs: SG13S25、SG13S114、SG13S89和SG13S32。多元logistic回归方法校正传统危险因素后分析基因多态性与脑卒中患病风险的独立相关性。结果表明, 人群未发现SG13S25和SG13S32具有多态性; ALOX5AP基因多态SG13S114 A等位基因频率在男性脑梗塞组显著高于对照组(33.6% vs 29.2%; $P=0.014$), SG13S114 AA基因型增加男性脑梗塞1.62倍的发病风险(95%CI: 1.11-2.35; $P=0.012$)。多态SG13S89G/A与脑梗塞的易感性不相关。单体型分析表明单体型频率在脑卒中患者和对照组间无显著的统计学差异。因此, 本研究结果提示ALOX5AP 基因多态的等位基因和基因型频率在东、西方人群存在种族差异, SG13S114 AA基因型增加中国人群男性脑梗塞的易感性。

关键词 [白三烯; 5-脂氧合酶激活蛋白; 遗传危险因素; 脑卒中](#)

分类号

Polymorphism of SG13S114T/A in the ALOX5AP Gene and the Risk for Stroke in a Large Chinese Cohort

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Abstract

<P>The 5-lipoxygenase activating protein, an important regulator in the biosynthesis of proinflammatory leukotrienes, has been reported to confer risks for cardiovascular diseases and stroke. The purpose of this study is to assess whether genetic variants in the ALOX5AP encoding the 5-lipoxygenase activating protein will influence the risk for stroke in the Chinese population. A total of 1 773 patients with stroke and 1 713 controls were recruited from seven clinical centers. Polymorphisms of SG13S114T/A and SG13S89G/A in the ALOX5AP were genotyped by the polymerase chain reaction and the restriction enzyme analysis. The multivariate logistic regression model was used to exclude the influence of the conventional vascular risk factors on stroke. The frequency of SG13S114A allele in the ALOX5AP was significantly higher in male patients with thrombotic stroke (33.6%) than in controls (29.2%; $P=0.014$). The SG13S114AA genotype was significantly associated with a 1.62-fold risk for thrombotic stroke in men (95% confidence interval, 1.11 to 2.35; $P=0.012$). The SG13S89G/A variant was not associated with stroke or its subtypes. Haplotype analysis showed no significant differences between stroke patients and controls. The present study suggested that a common genetic variant SG13S114T/A in the ALOX5AP gene is associated with an increased risk for atherothrombotic stroke in Chinese males, and racial differences in allele and genotype frequencies may account partially for the different association findings

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between populations.</P>

Key words [leukotrienes](#); [5-lipoxygenase activating protein](#); [genetics](#); [risk factors](#); [stroke](#)

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