

论文

新疆汉族EH危险因素及与eNOS基因rs7830和rs3918188相关性

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摘要:

目的 探讨新疆汉族人群原发性高血压(EH)危险因素及与内皮型一氧化氮合酶(eNOS)基因rs7830和rs3918188多态性与相关性。方法 于2007—2009年在现况流行病学调查基础上选择新疆汉族346例EH患者(EH组)和385名非EH患者(NT组)作为研究对象,采用酚-氯仿法提取DNA、SNaPshot技术检测多态性,分析新疆汉族人群EH危险因素及与eNOS基因rs7830和rs3918188相关性。结果 年龄、体质指数是新疆汉族人群EH发生的危险因素($P<0.05$);EH组和NT组eNOS基因rs7830位点的CC、AC和AA基因型频率(36.4%、53.5%、10.1% VS 37.7%、44.9%、17.4%)分布差异有统计学意义($\chi^2=9.721, P=0.008$),C和A等位基因频率(63.2%、36.8% VS 60.1%、39.9%)分布差异无统计学意义($P>0.05$);EH组和NT组eNOS基因rs3918188位点CC、CA和AA基因型频率(47.7%、44.8%、7.5% VS 41.3%、46.5%、12.2%)分布差异无统计学意义($P>0.05$),C和A等位基因频率(70.1%、29.9% VS 64.5%、35.5%)分布差异有统计学意义($\chi^2=5.075, P=0.024$);eNOS基因rs7830和rs3918188位点构建的CC单倍型频率(34.11% VS 27.52%)分布在2组差异有统计学意义($\chi^2=7.455, P=0.006$),CC单倍型患病风险为1.363。结论 年龄、体质指数是新疆汉族人群EH发生的危险因素;eNOS基因rs3918188和rs7830位点多态性可能与EH的发生相关。

关键词: 原发性高血压(EH) 内皮型一氧化氮合酶(eNOS) 新疆汉族人群 多态性 单倍型

Association of eNOS gene rs7830 and rs3918188 with EH and its risk factors among Han in Xinjiang

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Abstract:

Objective To explore the association of endothelial nitric oxide synthase(eNOS) gene rs7830 and rs3918188 polymorphism with essential hypertension(EH) and its risk factors among Han in Xinjiang Uygur Autonomous Region. Methods Based on the results of previous epidemiological investigation, 346 EH patients(EH group) and 385 non-EH patients(NT group) were selected among Han residents in Xinjiang in 2007-2009. DNA was extracted with phenol/chloroform extraction. SNaPshot technique was adopted for the detection of polymorphism. The correlation of polymorphism with EH and its risk factors were analyzed. Results Age, body mass index were the risk factors for EH($P<0.05$) among the subjects. The distribution frequency of eNOS rs7830 loci CC, AC, and AA genotype was 36.4%, 53.5%, and 10.1% for EH group and 37.7%, 44.9%, and 17.4% for NT group with statistically significant differences ($P<0.05$ for all). The frequency of eNOS rs 7830 C and A allele was 63.2% and 36.8% for EH group, and 60.1% and 39.9% for NT group, without significant difference($P>0.05$). The distribution frequency of eNOS rs3918188 loci CC, CA, and AA genotype was 47.7%, 44.8%, and 7.5% for EH group and 41.3%, 46.5%, and 12.2% for NT group, without significant differences($P>0.05$ for all). The frequency of eNOS rs 3918188 C and A allele was 70.1% and 29.9% for EH group, and 64.5% and 35.5% for NT group, without significant differences($P>0.05$). The frequency of eNOS gene rs7830 and rs3918188 CC haplotype was 34.11% and 27.52% for EH group and NT group, with a significant difference($P<0.05$) between the two groups. The risk of EH prevalence for CC haplotypes was 1.363. Conclusion Age, body mass index are EH risk factors among Han in Xinjiang. The eNOS gene rs3918188 and rs7830 loci polymorphism maybe associate with EH among Han in Xinjiang.

Keywords: essential hypertension endothelial nitric oxide synthase Han in Xinjiang polymorphism

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