

中国傣族、景颇族人群中与艾滋病相关的CCR5 Δ 32、CCR2b-64I、SDF1-3'A等位基因多态性分布 Distribution of the HIV/AIDS Associated CCR5 Δ 32,CCR2b-64I,SDF1-3'A Alleles in Chinese Dai and Chingpaw Populations from Dehong Autonomous Prefecture of Yunnan Province

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摘要 为了调查HIV-1感染相关的等位基因CCR5 Δ 32、CCR2b-64I、SDF1-3'A在我国云南省德宏州傣族景颇族人群中的频率和多态性分布,此课题以101例傣族和113例景颇族人群为研究对象,应用PCR、PCR-RFLP(聚合酶链反应-限制性片段长度多态性)分析方法进行检测,计算突变基因频率;并对其群体分布、性别分布进行统计学分析。结果表明,中国傣族景颇族人群中未发现CCR5 Δ 32等位基因突变;傣族CCR2b-64I、SDF1-3'A基因突变频率分别为0.2130和0.2030,景颇族CCR2b-64I和SDF1-3'A基因突变频率分别为0.1637和0.1770;与中国汉族人群相比较,傣族和景颇族中SDF1-3'A突变频率较低(P值分别为0.0322和0.0021);两个民族的CCR2b-64I和SDF1-3'A等位基因群体分布符合Hardy-Weinberg平衡,在性别之间分布无显著差异。中国傣族景颇族人群的CCR2b-64I等位基因的突变频率与汉族人相似,SDF1-3'A等位基因的突变频率比汉族人低,此两种突变基因在艾滋病发病过程中的影响值得进一步研究。由于未发现CCR5 Δ 32基因突变,中国傣族景颇族人群对HIV-1感染可能有较大的遗传易感性。

Abstract:The purpose of the work is to investigate the frequencies and polymorphisms of HIV-1 resistant CCR5 Δ 32,CCR2b-64I,SDF1-3'A alleles in Chinese Dai and Chingpaw populations. Whole blood samples from 101 Dai subjects and 113 Chingpaw were collected randomly and their genomic DNA were extracted with QIAgen Blood Kits. Allelic frequencies were identified by PCR-RFLP analysis. Allelic polymorphisms in Dai population or Chingpaw population and both sexes in the samples were analyzed by χ^2 test. The frequencies of CCR5 Δ 32,CCR2b-64I,SDF1-3'A alleles in Dai population were 0.0000,0.2130,0.2030, respectively; The frequencies of CCR5 Δ 32,CCR2b-64I,SDF1-3'A alleles in Chingpaw population were 0.000,0.1637,0.1770, respectively. Distributions of the CCR2b-64I,SDF1-3'A alleles among the both populations were in accordance with Hardy-Weinberg equilibrium. No statistical difference was found in the allelic frequencies of both CCR2b-64I and SDF1-3'A between male and female individuals. The frequencies of CCR5 Δ 32,CCR2b-64I alleles in Chinese Dai and Chingpaw populations are similar to that in Chinese Han population, while the frequency of SDF1-3'A allele in Chinese Dai and Chingpaw populations are lower in contrast to that in Chinese Han population. The genotyping and polymorphism of CCR5 Δ 32,CCR2b-64I,SDF1-3'A alleles in Chinese Dai and Chingpaw populations of Yunnan Province are the first time studied in China. The significance of the three mutant alleles conferring genetic resistance to HIV-1 and AIDS progression remains to be clarified.

关键词 傣族 景颇族 基因多态性 趋化因子受体-5 趋化因子受体-2 人类免疫缺陷病毒1 **Key words** Chinese Dai population Chinese Chingpaw population genetic polymorphism CC chemokine receptor-5 CC chemokine receptor-2 human immunodeficiency virus-1

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