

论著

TLR3c.1377, TLR9-1486和TLR9 2848基因多态性与多发性硬化易感性的关系

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摘要:

目的: 探讨中国南方汉族人群Toll样受体(Toll like receptor, TLR) 3和9单核苷酸多态性与多发性硬化(multiple sclerosis, MS)遗传易感的相关性。方法: 以123名临床及实验室确诊的中国南方汉族MS患者和126名与入组病人种族、年龄、性别相匹配健康志愿者为研究对象, 利用聚合酶链-限制性长度多态性分析(PCR-RFLP)技术检测TLR3和TLR9基因多态性。结果: TLR3c.1377基因型、等位基因频率MS组与对照组比较差异有统计学意义($P<0.05$), 携带T等位基因可降低MS患病危险性($OR=0.532, P=0.014$)。TLR9-1486基因型、等位基因频率在MS组与对照组间分布差异无统计学意义; TLR9 2848 A等位基因频率MS组较对照组增高(39.8% vs. 30.6%, $P=0.037$), A+等位基因携带者明显高于A-携带者患病危险性($OR=1.837, P=0.020$)。关联分析未发现TLR3c.1377与TLR9-1486和TLR9 2848有联合作用。TLR9-1486和TLR9 2848处于强连锁不平衡状态; MS组与对照组间单倍体型频率分布差异无统计学意义。结论: TLR3c.1377基因型频率、等位基因频率及TLR9 2848等位基因频率可能与中国南方汉族人群MS发病相关, 两基因位点可能均是MS的易感基因或与易感基因相连锁。

关键词: 多发性硬化 Toll样受体 单核苷酸多态性

TLR3c.1377, TLR9-1486, and TLR9 2848 gene polymorphisms and multiple sclerosis

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Abstract:

Objective To investigate the relationship between the gene polymorphism of TLR3c.1377, TLR9-1486, and TLR9 2848 and susceptibility to multiple sclerosis (MS) in Han people of south China. Methods A total of 123 unrelated MS patients from South China with a clinical or laboratory definition MS according to 2005 Revisions to the McDonald Criteria were studied. Another 126 controls were randomly selected from hospital staff of non-autoimmune diseases and healthy individuals. Toll like receptor (TLR) 3 and TLR 9 genotypes were determined by PCR and digested by specific restriction enzymes. Results There was significant difference in genotype and allele distribution of TLR3c.1377 polymorphism between the MS patients and the controls ($P<0.05$), and the MS patients with T allele had a lower risk ($OR=0.532, P=0.014$). There was no significant difference in genotypes and allele distribution of TLR9-1486 polymorphism between the MS patients and the controls. There was higher TLR9 2848 A allele frequency in the MS patients than in the controls (39.8% vs. 30.6%; $P=0.037$), and higher risk in MS patients with A allele than those without ($OR=1.837, P=0.020$). There was no significant interaction among the TLR3c.1377, TLR9-1486 and TLR9 2848 allele. Strong linkage disequilibrium was found between TLR9-1486 and TLR9 2848, but there was no significant interaction between the polymorphism of TLR9-1486 and TLR9 2848 in the MS patients. Conclusion TLR3c.1377 and TLR9 2848 polymorphisms may be related to MS in Han people in south China. TLR3c.1377 and TLR9 2848 may be linked with susceptibility genes.

Keywords: multiple sclerosis; Toll like receptor; single nucleotide polymorphism

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