



Association Of Mir-196a (Rs11614913) And Mir-499 (Rs3746444) With Ischemic Stroke An Iranian Study

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Objective: MicroRNAs are involved in the regulation of many physiological and pathological processes, such as atherosclerosis. Genetic polymorphisms in microRNA may affect its biogenesis and function. The aim of this study was to examine whether microRNA polymorphisms (mir-196a rs11614913 and mir-499 rs3746444) contribute to the risk of ischemic stroke.

Methods: Genotyping was performed in 85 patients and 105 normal control, using polymerase chain reaction-based restriction fragment length polymorphism (PCR-RFLP) method.

Results: In respect of rs11614913, significant association was observed between CC (P=0.003; OR= 0.41; CI=0.21 – 0.79), and TT (P=0.025; OR=2.22; CI=1.04 –4.8) genotypes. The inheritance of T allele increased the risk of ischemic stroke. There was a significant association between the GA genotype frequency of rs3746444 (P=0.01; OR= 0.41; CI=0.23– 0.87). T

Discussion: The present study provided evidence that the mir-196a and mir-499 polymorphisms are associated with a significantly increased risk of ischemic stroke in Iranian population. The common genetic polymorphism in pre-microRNAs may be contributed to the pathogenesis of ischemic stroke and represented as novel markers for stroke susceptibility.

Keywords: Stroke, MicroRNAs, polymorphism, genetics



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