

Abstract

Multiple sclerosis (MS) is a chronic inflammatory disease of the central nervous system with unknown etiology. At the present time, MS is considered as a multifactorial disease in which genetic and environmental interactions play an important role in the autoimmune mechanisms of the disease. The autoimmune nature of multiple sclerosis introduces cytokine genes as logical candidates for the loci determining susceptibility to the disease. The role of cytokines gene polymorphisms in MS has been previously reported in the various populations. In this study, we analyzed the association of rs16944 polymorphism in promoter region of *IL-1B* in 114 patients and 127 controls from Sistan and Baluchistan population and also the expression levels of *IL-1B* in 30 MS patients and 30 age and sex matched controls. The rs16944 Polymorphism of *IL-1B* is genotyped by PCR-RFLP method using *Ava*I Enzyme and the expression of *IL-1B* were quantified by RT-PCR method in peripheral blood mononuclear cells (PBMCs). Our results revealed that there is no association between rs16944 polymorphism and MS susceptibility but the expression level of *IL-1B* were increased in MS patients compared with healthy controls.

Keywords: Multiple Sclerosis, polymorphism, gene expression, IL-1B



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Title:

**Expression and polymorphism analysis of *IL-1B*
gene and immortalization of B lymphocytes via EBV
virus in Sistan and Baluchistan Multiple Sclerosis
patients**

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