Association between CTLA-4 polymorphism and systemic lupus erythematosus

Mahdieh Shojaa1,2, Patricia Khashayar3, Mahsa Amoli3, Mehrdad Aghaie4, Mostafa Qorbani5, Mahmoud Akbarian6, Neda Ranjbarpour7, Arghavan Kouroshnia3

1. Golestan University of Medical Sciences, Gorgan; 2. Osteoporosis Research Center, Endocrinology and Metabolism Clinical Sciences Institute, Tehran University of Medical Sciences, Tehran; 3. Endocrinology & Metabolism Research Center (EMRC), Endocrinology and Metabolism Clinical Sciences Institute, Tehran University of Medical Sciences, Tehran; 4. Dept. of Rheumatology, Faculty of Medicine, Bone Joint and Connective Tissue Research Center (BJCRC), Golestan University of Medical Sciences, Gorgan; 5. Dept. of Public Health, Alborz University of Medical Sciences, Karaj and Non-communicable Diseases Research Center, Endocrinology and Metabolism Population Sciences Institute, Tehran University of Medical Sciences, Tehran; 6. Rheumatology Research center, Tehran University of Medical Sciences; 7. Genetic Department, Islamic Azad university Tehran, Tehran

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Abstract

Background: Cytotoxic lymphocyte antigen-4 (CTLA-4) plays an important role in regulating T cell activities. CTLA-4 gene polymorphisms are associated with genetic susceptibility to various autoimmune diseases, including systemic lupus erythematosus (SLE). The present study was conducted to analyze the role of CTLA-4 polymorphism at positions −1722TC in patients suffering from SLE.

Methods: Samples were collected from 180 SLE patients and 304 healthy people. Both groups were equal in terms of age and ethnicity. Polymerase chain reaction restriction fragments length polymorphism (PCR-RFLP) was used to analyze the genotype and allele frequencies of these polymorphisms. Data were analyzed by SPSS software.

Results: No statistically significant difference was observed between the studied genotypic and allelic frequencies, SLE patients and the controls. There was a significant correlation between age range 15-45 and TT genotype (P<0.0001). However, no significant correlation was found between other risk factors and different genotypes.

Conclusion: The results suggested that 1722TC polymorphism in the promoter region of the CTLA-4 gene does not play any role in the genetic susceptibility to SLE.

Keywords: CTLA-4 1722TC, systemic lupus erythematosus, polymorphism, promoter

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References


