

Survey of the association between polymorphisms of CTLA-4 exon 1 +49 A/G genes with rheumatoid arthritis in Iran

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Abstract

Cytotoxic T-lymphocyte-associated protein 4 (CTLA-4), which suppresses T cell proliferation, is a promising candidate for the susceptibility genes to rheumatic arthritis diseases (RA). This study aims to examine the association between the polymorphisms of the CTLA-4 exon 1(+ 49) genes with RA in the Qazvin city of Iran population. The polymerase chain reaction of genomic DNA-restriction fragment length polymorphism (PCR-RFLP) was applied to genotype the CTLA-4 exon 1(+ 49) polymorphisms in 105 RA patients and 90 control subjects. Laboratory diagnostic tests were also measured for RA and control groups. Our results did not demonstrate a significant difference in allele and genotype frequencies of the CTLA-4 exon 1(+ 49) between RA patients and the control group ($p < .0001$). There was no significant difference in age at onset, CRP, RF value in patients with RA according to the CTLA-4 polymorphisms; just anti-CCP showed a significant difference. Our data declared that polymorphisms of CTLA-4 exon 1(+ 49) genes are not correlated with RA susceptibility and its clinical and paraclinical manifestations.

Keywords: CTLA4; exon 1(+ 49) polymorphisms; rheumatoid arthritis.