

عنوان مقاله:

Analysis of IL-33 Gene Polymorphisms (rs1157505C/G and rs11792633C/T) and the Risk of Tuberculosis in Southeastern Iran

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خلاصه مقاله:

Tuberculosis is a vagarious infectious disease that generally affects the lungs. Accordingly, in some cases, it can also affect the liver and kidney. Host genetic may affect tuberculosis caused by bacillus *Mycobacterium tuberculosis*. The main risk factors for the disease are a weakened immune system because of diabetes, some cancers, HIV/AIDS, severe kidney disease, cancer treatment, and malnutrition. IL-33 is involved in the activation of eosinophils, mast cells, basophils, and natural killer cells and the maturation of T helper type2 cells. The developments of CD4 (+) TH1 and CD8 (+) T cell responses are involved in protection against TB, IL-33 promotes the development of these cells. The purpose of the present research was to investigate the association between *Mycobacterium tuberculosis* infection and IL-33 gene polymorphisms (rs1157505C/G and rs11792633C/T) with tuberculosis in the cases and controls from the area of high tuberculosis prevalence in Iran. In this study, 100 patients with tuberculosis disease and 91 healthy controls were included. Polymorphisms of the IL-33 gene were genotyped using T-ARMS-PCR. The analysis of the haplotype combinations among IL-33 polymorphisms demonstrated that the magnitude of the association was higher for the combined CC/CT genotypes. The CT genotype related to C/T polymorphism of the IL-33 gene increased the risk of tuberculosis. The combined CG+GG genotypes related to C/G polymorphism of the IL-33 gene also increased the risk of tuberculosis, but the difference was not statistically significant. In conclusion, IL-33 gene polymorphisms may be considered as important contributors to tuberculosis in Iran.

کلمات کلیدی:

Bacillus, IL-33, *Mycobacterium*, rs1157505 C/G, rs11792633 C/T, Tuberculosis

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