عنوان مقاله:

The Association between C۱۹۴T and G۳۹۹A Polymorphism of XRCC۱ Gene and Susceptibility to Gastric Cancer in Population from Western Iran

محل انتشار:

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خلاصه مقاله:

Background: Gastric cancer is one of the most common malignancies in the world. It may result from a defect in the genes involved in DNA repair. One of the essential genes in the repair pathway is the XRCC۱ gene that its polymorphisms in the human population play a role in gastric cancer susceptibility. The main purpose of this study was to investigate the association of ۱۹۴C/T and ۳۹۹G/A polymorphisms of the XRCC۱ gene with gastric cancer in an Iranian population. Materials and methods: A total of ۶۶ patients with gastric cancer and ۶۷ control individuals were enrolled in our study. Following DNA extraction from blood samples, polymorphisms were analyzed by polymerase chain reaction-restriction fragment length polymorphism (PCR-RFLP) assay. Results: The allele frequencies of C/T of XRCC۱-۱۹۴C/T in the control and patients groups were ۸۳.۱۷% and ۷۱.۲۹%, respectively. Moreover, The allele frequencies of G/A of XRCC۱-۳۹۹G/A in control and patient groups were ۶۶.۳۴% and ۶۲.۳۸%, respectively. Our results indicated a significant positive association between the distribution T/C alleles and the risk of gastric cancer (χ۲: ۵.۳۷ and P=۰.۰۲), but no significant association was found in the distribution G/A alleles (χ۲: ۰.۴۷ and P=۰.۴۸). Conclusion: Altogether, these findings indicate a positive association between the distribution of ۱۹۴T/C alleles of XRCC۱ and the risk of gastric cancer and the presence of the C allele may increase the risk of gastric cancer.

کلمات کلیدی:

PCR, RFLP, SNP, potential markers, DNA repair