عنوان مقاله:

Assessing the Relationship of C-FOS Gene Expression and rs۹۹۷۴۱۵۲۲۵ Polymorphism with Gastric Cancer in the Iranian Population of Isfahan Province

محل انتشار:

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خلاصه مقاله:

Objective: Gastric cancer (GC) is an exceedingly prevalent cancer worldwide and one of the main reasons for death from cancer. The individuals' susceptibility to GC depends upon several genetic and epigenetic alterations that occur over their lifetime. The C-FOS is an oncoprotein that engages in tumorigenesis through its oncogenic roles. It modulates many cellular functions, and its aberrant expression can lead to several types of cancers. Materials and Methods: The Amplification Refractory Mutation System (ARMS) PCR technique was conducted to detect genotypic types of rs۹۹۷۴۱۵۲۲۵ in ۵۰ healthy controls and ۴۵ patients with GC. Furthermore, the quantitative Real-Time PCR (qRT-PCR) technique was applied to determine C-FOS relative gene expression in ۲۰ healthy controls and ۲۰ cancer patients. Results: Genotypic types of rs۹۹۷۴۱۵۲۲۵ did not seem to be correlated with GC (P > ۰.۰۵), but allele "A" frequency was correlated (P = ۰.۰۴۸). Also, there was a significant difference between the two groups regarding the C-FOS gene expression level (P = ۰.۰۴۴). Conclusions: It has been found that genotypic types of rs۹۹۷۴۱۵۲۲۵ have no impact on GC; however, the presence of allele "A" is associated with a potential risk of GC development. In addition, the increased C-FOS gene expression was linked to the progression of this cancer; hence, preventing GC through C-FOS down-regulation might be a promising approach.

کلمات کلیدی:

Stomach Neoplasms, Genes, fos, Genetic Variation, Real-Time Polymerase Chain Reaction, Iran

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