

Original Paper

Association of VEGF gene +405C/G polymorphism with the risk of breast cancer in northern Iran

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Abstract

Background and Objective: Breast cancer is a cancer in women with high prevalancy worldwide. Vascular endothelial growth factor (VEGF) is one of the most important Pro-angiogenic factors. +405C/G is one of the common VEGF polymorphism which may have an impact on the level of gene expression and over loading of gene products. This study was done to evaluate the association between VEGF +405C/G gene polymorphism and breast cancer risk in north of Iran.

Methods: This case-control study was carried out on 50 patients with breast cancer and 50 normal aged-matched controls in north of Iran. Genomic DNA was extracted from peripheral blood cells. To determine the genotype of +405 C/G VEGF gene polymorphism, PCR-RFLP method was used.

Results: The prevalence of genotypic frequencies of GG, GC and CC in controls were 42%, 48% and 10%, respectively and in patients were 22%, 46% and 32%, respectively (P<0.05). The +405C allele was considered as a risk factor in breast cancer (P<0.05).

Conclusion: It seems +405 C/G VEGF gene polymorphism may be associated with the breast cancer in northern Iran.

Keywords: Breast cancer, Polymorphism VEGF, +405C/G gene, Iran

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