Lack of association between VEGF -2578C/A polymorphism and risk of colorectal cancer in an Iranian population

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Abstract

Aim: Vascular endothelial growth factor (VEGF) is a key regulatory factor in angiogenesis and with essential roles in the development of malignancy in colorectal cancer (CRC), which is the third most prevalent cancer worldwide. Here we evaluated the VEGF gene -2578C/A polymorphism as a potential susceptibility factor in colorectal cancer (CRC) occurrence amongst Iranian CRC patients. **M&M:** VEGF -2578C/A polymorphism was evaluated in 200 CRC patients and 200 healthy control subjects using restriction fragment length polymorphism analysis methods. **Results:** The frequencies of CC, AC and AA genotypes among CRC patients were 22.5%, 51% and 26.5%, respectively and genotype frequencies were 16%, 54% and 30% in controls cohort respectively (P=0.247). The A allele frequency among case group was 52% and for control group, 57%. C allele frequency in case and control groups was 48% and 43%, respectively (p=0.156). No significant association between this polymorphism and CRC stage was observed (p=0.990). **Conclusion:** Our findings provide limited support for the hypothesis that the -2578C/A VEGF are associated with increased risk for Colorectal cancer in Iranian colorectal cancer patients and suggest instead that meta data studies, which have previously relied upon populations definitions such as 'asian', should more specifically take into account country of origin when associating prognostic value to a given genotype.

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