



-2578 A>C Polymorphism in the Vascular Endothelial Growth Factor Gene and the Risk of Endometriosis in an Iranian Population

Negar Sarhangi^a, Mahsa M. Amoli^b, Tahereh Najji^a, Maryam Shahrabi-Farahani^{b*}

^a Department of Molecular and Cellular Sciences, Faculty of Advanced Sciences & Technology, Pharmaceutical Sciences Branch, Islamic Azad University, Tehran-Iran (IAUPS)

^b Endocrinology and Metabolism Research Center, Endocrinology and Metabolism Clinical Sciences Institute, Tehran University of Medical Sciences, Tehran, Iran

E-mail: Maryam_shahrabif@yahoo.com

Background:

Endometriosis is one of the most common benign gynecological conditions characterized by endometrial tissue outside the uterus. Several studies have related genetic polymorphisms as a factor that contributes to the development of endometriosis. Whereas the implantation of endometrial cells requires neovascularization, which considered an important phenomenon for the implantation of endometrial cells in ectopic sites; thus growth and other angiogenic factors such as the VEGF and EGFR could be related to the development of endometriosis. We screened women with endometriosis for -2578A/C polymorphism, whether is associated with the risk of endometriosis in Iranian people.

Material and Methods:

We investigated 84 patients with histopathologically or laparotomy confirmed endometriosis and 84 control group women without surgically evidence of endometriosis. Genomic DNA was extracted by salting out method. We genotyped -2578 A>C VEGF SNP in endometriosis case and non-endometriosis women by using PCR-RFLP. Results were confirmed by sequencing analysis.

Results:

While the -2578 VEGF genotype frequencies in endometriosis group were 18% A/A, 60% A/C and 22% C/C, they were 13% A/A, 60% A/C and 27% C/C in the control group. This finding between the case and control groups did not demonstrate any significant difference.

Conclusion:

Our data do not provide any evidence supporting an association between -2578 VEGF polymorphism and endometriosis susceptibility so it cannot be a useful marker of endometriosis risk in our population.

Key word: Endometriosis, VEGF, polymorphism, Iranian women