Untitlale: Vitamin D and VDR gene polymorphism (FokI)(Taq1) in epithelial ovarian cancer in North of Iran

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Abstract: Introduction: Vitamin D deficiency and vitamin D receptor (VDR) gene polymorphism (FokI, Taq1) are reported to increase the risk of many cancers. Role of vitamin D and its receptor polymorphisms in ovarian cancer has not been clearly defined. Objective: To study the levels of serum vitamin D and occurrence of vitamin D receptor gene polymorphism (FokI, Taq1) in cases of ovarian cancer. Material and methods: FokI, Taq1 genotyping were done by PCR-RFLP technique and vitamin D levels were estimated by chemiluminescence immunoassay. Results: Serum vitamin D levels were significantly (p < 0.03) lower in ovarian cancer cases as compared to controls. The homozygous (TT) and heterozygous (CT) genotype predispose to the development of ovarian cancer in Indian population (OR: 2.27, 95% CI: 1.4-3.4) as compared to the homozygous (CC) genotype. Vitamin D deficiency and VDR gene polymorphism (FokI) act non-synergistically (p value < 0.4). Conclusion: Low blood levels of vitamin D and VDR receptor polymorphism (FokI) might be a risk factor for the development of ovarian cancer. Other novel ligands of vitamin D receptor might be responsible for the nonsynergistic effect.

Keywords: Vitamin D, Ovarian Cancer, Polymorphism

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