

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: 2.37, 95% CI: 1.04-5.44) 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.