

Relation of Vitamin D Receptor Gene (VDR) Polymorphism FOK-I in Subtype of Hashimoto's Thyroiditis

Senay Topsakal¹, Bedia Guleryuz², Fulya Akin¹, Guzin Fidan Yaylali^{1,2}, Melek Tunç Ata³, Mukaddes Mergen Dalyanoğlu³, Sebahat Turgut³

¹Department of Endocrinology and Metabolism, Faculty of Medicine, Pamukkale University, Kinikli Campus, Denizli, 20070, Turkey

²Department of Internal Medicine, Faculty of Medicine, Pamukkale University, Kinikli Campus, Denizli, 20070, Turkey

³Department of Physiology, Faculty of Medicine, Pamukkale University, Kinikli Campus, Denizli, 20070, Turkey

Objectives:

VDR gene polymorphisms and vitamin D levels have been associated with various autoimmune diseases such as Hashimoto's thyroiditis (HT) (1,2) More than 30 gene polymorphisms are found in VDR gene.(3) The most common 4 types of polymorphisms studied in autoimmune disease are FOK-I (ekzon 2), BSM-1 (intron 8), APA-1 (intron 8) and TAQ-I (ekzon 9).(4) The aim of this study is to investigate the association between VDR FOK-I gene polymorphism and Hashimoto's thyroiditis subtypes.

Methods:

We performed a case-control study that included 139 cases with HT (50 euthyroid, 50 subclinical hypothyroid, 39 overt hypothyroid patients) and 50 healthy control. Subjects were recruited from Endocrinology Clinic. VDR FOK-I gene polymorphisms were examined using a polymerase chain reaction (PCR). HT cases were classified into three subgroups according to their thyroid function status: Euthyroid patients (Group-1), subclinical hypothyroid patients (group-2) Evident hypothyroid patients (Group-3).

Table-1 The FOK-I genotype distribution in groups.

	EUTHYROID HT (GROUP-1) n(%)	SUBCLINICAL HT (GROUP-2) n(%)	EVIDENT HT (GROUP-3) n(%)	CONTROL n(%)
FOK-I				
FF	24(49)	23(46.9)	14(36.8)	29(58)
Ff	18(36.7)	19(38.8)	20(52.6)	16(32)
ff	7(14.3)	7(14.3)	4(10.5)	5(10)

Results:

There were no statistically significant differences observed in all Hashimoto's thyroiditis group compared with the control group. No statistically significant difference was seen between euthyroid, subclinical hypothyroid, evident hypothyroid groups and the control group.(Table-1)

Conclusions:

This study showed that VDR FOK-I gene polymorphism did not effect the occurrence of the HT. In a study about VDR genotype distribution in Turkey reported the frequency of FF genotype as 55%, Ff genotype as 36% and ff genotype as 9% in FokI gene. (5).This result is supported our study.

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