Research Article

Correlation of Vitamin D and Vitamin D Receptors in Chronic Telogen Effluvium in Females

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Abstract

Telogen effluvium (TE) is the most common form of hair loss. It is caused by any disruption of hair growth cycle resulting in increased synchronized telogen hair shedding. This study was conducted to correlate of vitamin D and vitamin D receptor in chronic telogen effluvium in females.The study included 30 female patients with CTE and 30 as controls to measure serum vitamin D level by ELISA and tissue vitamin D receptor by PCR to correlate of VD and VDR in CTE.

Key words: vitamin D, PCR, ELISA

Introduction

Hair is considered as one of the most deifning parts of human appeareance[(1)]. Gentility, sexuality, attractive quality and character are distinctively identified with lady's hair[(2)] .

Telogen Effluvium (TE) is a typical strategy for male pattern baldness[(3)]. It is brought about by any unsettling influence of hair development cycle bringing about expanded facilitated telogen hair shedding [(4)]. Telogen hair start to shed at expanded sum the assessed measure of hair loss ordinarily is 125 hairs for every day[(5)]

Increased hair shedding can be scored utilizing valited visual simple scales[(6)]. On the off chance that hair shedding proceeds with under a half year so it is intense TE, while incessant TE is hair shedding dependable over a half year [(7)]. on the off chance that a trigger is intense and brief, the TE will plausible be intense and will be settled. In the event that the trigger is progressing, repetitive, sequentially happening, or not turned around, at that point the telogen hair shedding can be continuous[(8)].

Nutrient D is a hormone that acting an essential job in calcium homeostasis,immune Guideline and cell development separation[(9)] . Its chief source is photosynthesis in the skin, while minor sums are coming about because of sustenance and diet supplements[(10)].

Patients and Methods

This study [a case-control study) included 30 females patients with CTE attending the outpatient clinic of Minya dermatology and Leprosy hospital during period from February to Septmber 2019.

Sample collection: 5 ml of venous blood was collected from all studied groups for estimation of 25 hydroxy vitamin D by enzyme linked immuno sorbant assay(ELISA) technique and 2mm punch Biopsy from scalp to detect tissue level of vitamin D Receptor by polymerase chain reaction(PCR).

Statistical methodology

• Analysis of data was done by IBM computer using SPSS (statistical program for social science)

Results

• The study involved 30 female patients with chronic telogen effluvium and 30 as controls. The mean age of patients in the study is 33.9±10.8years.

Table (1): Correlation between vitamin D and vitamin D receptor with chronic telogen effluvium

Chronic telogen effluvium		
Parameters	**Spearman's rho**	**P value**
Vitamin D	-0.71	0.0001*
Vitamin D receptor	-0.64	0.0001*

There was a statistically significant Negative moderate correlation (r=-0.71, p=0.0001) between serum VD and CTE patients included in the study.
There was a statistically significant Negative moderate correlation (r=-0.64, p=0.0001) between tissue VDR and CTE patients included in the study .

Discussion

CTE characterized as a confusion in ordinary hair cycle bringing about sudden and diffuse hair loss(4).

Regarding vitamin D, our study revealed that the levels of serum vitamin D and tissue vitamin D receptors were significantly lower in patients with CTE than in control group. This results conducted with some authors while disconducted with other authors.

Conclusion and Recommendations

Regarding vitamin D, our study revealed that the levels of serum vitamin D and tissue vitamin D receptors expression were significantly lower in patients with CTE . So: Further studies with wider scope on large number of patients to clarify the role of vitamin D in chronic telogen effluvium.

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