



A STUDY OF SERUM CONCENTRATION OF VITAMIN D IN PATIENTS OF PSORIASIS.

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ABSTRACT Many autoimmune skin diseases have been associated with deficiency of serum vitamin D level. Psoriasis now being proved as an autoimmune disease was analyzed for vitamin D in the current study. No other such study has been reported has been reported in this part of the world. We sincerely hope that the study puts in an ideal platform to understand this complicated relation.

KEYWORDS : Vitamin D, Psoriasis, Autoimmune, 25-hydroxy

INTRODUCTION:

Many autoimmune skin diseases have been associated with deficiency of serum vitamin D level. Psoriasis now being proved as an autoimmune disease was analyzed for vitamin D in the current study. Psoriasis is a long lasting auto-immune disorder characterized by erythematous scaly patches over extensor aspects of the body¹. It affects about 2-3% of world population. According to World Psoriasis Day consortium about 125 million people all over the world suffer from this disease². It is characterized by abnormal cycle of epidermal development, with epidermal hyperproliferation, altered skin cell maturation, vascular changes and inflammatory features. It is concluded that environmental factors including β hemolytic streptococci infection and multiple genetic components may be responsible for the pathogenesis of the disease³. Histological studies of psoriatic lesions have shown leucocytes infiltration, namely by T lymphocytes and neutrophils⁴.

No other such study has been reported has been reported in this part of the world. We sincerely hope that the study puts in an ideal platform to understand this complicated relation.

Aims and Objectives:

To study the Serum concentration of vitamin D in patients with psoriasis.

MATERIALS AND METHODS:

This study was done in the Department of Dermatology and the reports were collected and analysed with the help of Dr Shreesha Khandige.

Thirty psoriasis patients were matched for sex and age with thirty controls and then the serum was tested for the levels of Vitamin D levels.

The study was done from May 2017 to May 2019.

The psoriasis patients based on the Psoriasis Area Severity Index were divided into three groups and the statistical analysis were done to evaluate the levels of Vitamin D serum levels and to check the association.

RESULTS:

Table 1: Age Distribution

Group	Number	Mean age	Std Deviation
Case	30	38.73 years	5.84 years
Control	30	37.88 years	3.78 years

Table 2: Serum Vit D Levels

Parameter	Case	Control	p-value
25-(OH)D (ng/ml)	13.52±4.51	27.34±3.37	<0.05

Graph 1: Severity of the Disease

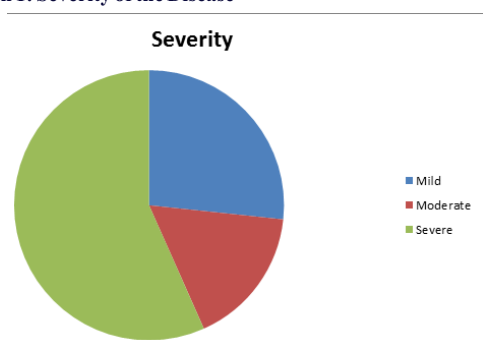


Table 3: Comparison between mild and severe psoriasis:

Parameter	Mild	Severe	p-value
25-(OH)D (ng/ml)	18.46±4.36	11.46±3.32	<0.05

DISCUSSION:

Recent studies suggest that psoriasis, like atherosclerosis, is an autoimmune disease. Clinical manifestation of both diseases includes inflammation which appears to be driven by Tcell cytokines characteristic of the T-helper cell response. Activation of the immune system in psoriasis cause changes in patient's lipid profile⁵. Vitamin D refers to a group of fat-soluble secosteroid responsible for increasing intestinal absorption of calcium, iron, magnesium, phosphate, and zinc⁶. In the circulation it is hydroxylated twice to form calcitriol, the active form of vitamin D⁷. Vitamin D without a subscript refers to either D or D or both. These are known collectively as calciferol^{8,9,10}.

Psoriasis is a dermatological condition associated with various comorbidities. There could be various reasons for vitamin D deficiency in patients of psoriasis. Osteoporosis is a well-known disease associated with vitamin D deficiency. Increased risk of osteoporosis in male psoriatic patients has been reported by Dreier J et.al. Similarly various studies have shown the association of vitamin D deficiency and death due to cardiovascular disease. Psoriasis has also been associated with cardiovascular mortality as shown in various study. Phototherapy is recommended in patients of psoriasis. There are various reasons behind it. One of this is that narrowband UV-B effectively increases serum 25-(OH) D while it clears psoriasis which was shown by Ryan C et.al in his study. 25-(OH) D through VDR (vitamin D receptor) influences the immune function of dendritic and T cell. Also VDR influences the growth and function of keratinocytes. So 25-(OH) D may have a crucial role in etiopathogenesis of psoriasis. Our study matched with Latha Srirama¹¹ and Jacinto orgaz-Molina et.al¹².

CONCLUSION:

There is a significance difference between the Vit D levels that has been observed between the case and the control and also in between the different groups.

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