



ORIGINAL RESEARCH PAPER

Dermatology

SERUM CONCENTRATION OF VITAMIN D IN PATIENTS OF PSORIASIS A CASE CONTROL AND CORRELATION STUDY:

KEY WORDS: Psoriasis, Autoimmune, Vitamin D,

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ABSTRACT

Psoriasis is a long-lasting autoimmune disease characterized by patches of abnormal skin. These skin patches are typically red, dry, itchy, and scaly. On people with darker skin the patches may be purple in colour. Psoriasis varies in severity from small, localized patches to complete body coverage. Injury to the skin can trigger psoriatic skin changes at that spot, which is known as the Koebner phenomenon. 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.

INTRODUCTION:

Psoriasis is a long-lasting autoimmune disease characterized by patches of abnormal skin. These skin patches are typically red, dry, itchy, and scaly. On people with darker skin the patches may be purple in colour^{1,2}. Psoriasis varies in severity from small, localized patches to complete body coverage. Injury to the skin can trigger psoriatic skin changes at that spot, which is known as the Koebner phenomenon^{3,4}. 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 study⁵.

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 profile⁶. 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}.

AIMS AND OBJECTIVES:

Serum concentration correlation study with the severity of the disease Case and control correlation of Vitamin D.

MATERIALS AND METHODS:

This study was done in the Department of Dermatology, Srinivas Institute of Medical Sciences, Mangalore.

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

The study was done from May 2018 to April 2019.

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

RESULTS:

Table 1: Table 1: Age Distribution

Group	Number	Mean age	Std Deviation
Case	70	37.36 years	15.4 years
Control	90	37.02 years	11.12 years

Table 2: Comparison between mild and severe psoriasis:

Parameter	Mild	Severe	p-value
25-(OH)D (ng/ml)	17.82±1.65	10.37±3.01	<0.05

Table 3: Serum Vit D Levels

Parameter	Case	Control	p-value
25-(OH)D (ng/ml)	12.21±1.59	24.35±1.83s	<0.05

DISCUSSION:

There are five main types of psoriasis: plaque, guttate, inverse, pustular, and erythrodermic. Plaque psoriasis, also known as psoriasis vulgaris, makes up about 90 percent of cases. It typically presents as red patches with white scales on top. Areas of the body most commonly affected are the back of the forearms, shins, navel area, and scalp. Guttate psoriasis has drop-shaped lesions. Pustular psoriasis presents as small non-infectious pus-filled blisters. Inverse psoriasis forms red patches in skin folds. Erythrodermic psoriasis occurs when the rash becomes very widespread, and can develop from any of the other types. Fingernails and toenails are affected in most people with psoriasis at some point in time. This may include pits in the nails or changes in nail color.

Psoriasis is generally thought to be a genetic disease that is triggered by environmental factors. In twin studies, identical twins are three times more likely to be affected compared to non-identical twins. This suggests that genetic factors predispose to psoriasis. Symptoms often worsen during winter and with certain medications, such as beta blockers or NSAIDs. Infections and psychological stress can also play a role.^{[9][16]} Psoriasis is not contagious. The underlying mechanism involves the immune system reacting to skin cells.^[4] Diagnosis is typically based on the signs and symptoms.

CONCLUSION:

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

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