

A comparative study of depression and anxiety in psoriasis and other chronic skin diseases

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Abstract *Background* Psoriasis is often associated with psychological disorders and social discomfort.

Objective To compare depression and subcomponents of anxiety among psoriasis patients and controls with other chronic skin disorders.

Patients and methods 162 psoriasis patients and 200 patients with other chronic skin disorders in the age group of 14-60 years were selected from Dermatology & Venereology Outpatient Department of Sri Guru Ram Das Institute of Medical Sciences and Research, Amritsar. The participants responded to IPAT Anxiety scale and Zungs Self-Rating Depression Scale. The data was analyzed statistically.

Results The results of present study clearly revealed that psoriasis patients scored higher on depression and different sub-components of anxiety namely low self control, suspicion, apprehension and tension as compared to the control group.

Conclusions The findings of the present study highlight the higher prevalence of depression and anxiety in the psoriasis patients as compared to patients with other chronic skin diseases; it also shows importance of psychological adjustment in patient with psoriasis. It is recommended that the patients with psoriasis require psychological evaluation and management along with medical treatment.

Key words

Depression, anxiety, psoriasis.

Introduction

Psoriasis is a chronic inflammatory skin disease which is characterized by thick, red, scaly lesions present mainly over the extensor aspects of the body. There may be moderate to severe itching over the lesions. It can present at any age and can appear just after birth or in

old age.¹ Psoriasis is associated with significant psychological distress and psychiatric morbidity,^{2,3,4} experiences of stigmatization,^{4,5} and decreased health related quality of life.⁶

Stress is the state resulting from pressure applied to an organism. Pressure may be caused by external or internal demands called stressors. Stressors can be external, originating from family, work, social or financial demands which are difficult to meet. They can be internal, initiated by guilt, anxiety, self-criticism, self-obligations, psychological strain or conflicting values.

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Anxiety is a natural emotion recognized by natural worrying and the inability to relax properly. Stress and anxiety create a vicious cycle. Anxiety causes stress, which then makes people more sensitive to stressful events. This in turn contributes to the risk of developing an anxiety disorder.

Patients of psoriasis were studied because it is a chronic disease with remissions and relapses and provides a platform for examining the role of stress, depression and anxiety in affected individuals.

Patients and methods

This study comprised of 162 consecutive patients of psoriasis, aged between 14 and 60 years, suffering from the disease for 6 months or more and attending our outpatient department with a formal diagnosis of diffuse plaque psoriasis (i.e. involving more than 10% of the body's surface), and exacerbation of psoriasis during the last 3 months. No patient was included with symptoms of psoriatic arthritis. All the patients were subjected to a detailed history taking of dermatological and psychological complaints and clinical examination. The comparison group comprised of 200 consecutively enrolled patients of chronic skin conditions other than psoriasis like nodulocystic acne, atopic dermatitis, vitiligo, chronic urticaria, androgenetic alopecia and lichen planus, suffering for the last 6 months or more. All patients were asked to provide socio-demographic data, medical history and family histories. Other questions included the duration of disease, age of onset of the disease, any treatment taken, and use of psychotropic drugs. Skin, hair, mucosal involvement, and nail changes were recorded.

Tools

1. IPAT Anxiety Scale

This test was designed by Cattle to find out the anxiety scores. It consists of 40 items. This test was made up of five sub-components of anxiety like low self-control, emotional instability, suspicion, apprehension and tension.

2. Zungs self-rating depression scale

This test was designed to check the level of depression in daily living. This test consists of 20 items out of which ten items are scored as indicators of depression and other ten items scored positively worded, hence are reverse-scored. Total score of this scale is 80 and scores rating above 50 are indicative of depression.

The data thus generated was summarized using descriptive statistics in IPAT anxiety scale and Zungs self-rating depression scale. The differences between groups (patients with psoriasis vs. controls) were assessed by the *t*-test.

Results

There were 162 subjects in psoriasis group and 200 subjects in the control group (**Table 1**). The average age of subjects in psoriasis group was 44.6 years and it was 39.8 years in the control group.

The results of the present study are reported in **Table 2** in which means and SDs of psoriasis patients and control group for all dimensions of depression, anxiety are given. The psoriasis patients scored higher on depression (t 3.12; $p < 0.01$) and four subcomponents of anxiety, i.e. low self control (t 2.60; $p < 0.01$), suspicion (t 2.21; $p < 0.05$), apprehension (t 4.31; $p < 0.01$) and tension (t 2.86; $p < 0.01$). Psoriasis patients were more depressed as compared to the control group. They liked loneliness, lacked concentration and had an irritable and aggressive behavior. The results revealed

that psoriasis patients were more anxious and showed little regard for socially approved character response. They lacked self control and foresight, were less cohesive and low on morale. They also showed unstable personality by getting easily annoyed with people. They were unable to have sound sleep because of anxiety and frustration. The psoriasis patients reported greater restlessness, phobic reactivity, and were suspicious of the motives of others. They got easily upset, were jealous, insecure and less satisfied with life than the comparison group. The result of t-test for emotional instability was statistically non-significant.

Figure 1 shows the graphical representation of means of depression and subcomponents of anxiety demonstrating significant difference of psoriasis patients from control group on five accounts namely depression, low self control, suspicion, apprehension and tension while another subcomponent of anxiety, i.e. emotional instability was statistically non-significant.

Table 1 Demographic and clinical characteristics of patients with psoriasis and comparison subjects.

	<i>Psoriasis</i> (N=162)	<i>Control</i> (N=200)
Age (mean) years	44.6	39.8
<i>Gender</i>		
Male	112 (69.1%)	92 (46%)
Female	50 (30.9%)	108(54%)
<i>Marital status</i>		
Unmarried	43 (26.5%)	67 (33.5%)
Married	119 (73.5%)	131 (65.5%)
Separated	0 (0%)	2 (1%)
<i>Education</i>		
Primary school	19 (11.7%)	36 (18%)
High school	103 (63.6%)	112 (56%)
College	40 (24.7%)	52 (26%)
<i>Tobacco consumption</i>		
Smoker	23 (14.2%)	38 (19%)
Non-Smoker	139 (85.8%)	162 (81%)
<i>Alcohol intake</i>		
Drinker	17 (10.5%)	33 (16.5%)
Non-drinker	145 (89.5%)	167 (83.5%)
<i>Place of living</i>		
Urban	71 (43.8%)	83 (41.5%)
Rural	91 (56.2%)	117 (58.5%)

Table 2 Means and standard deviations of psoriasis patients and control groups based on all the measured variables with statistical significance

<i>Variable Name</i>	<i>Abb</i>	<i>Psoriasis group</i>		<i>Control group</i>		<i>t-Value</i>	<i>p</i>
		<i>Mean</i>	<i>SD</i>	<i>Mean</i>	<i>SD</i>		
Depression	DP	46.25	6.69	43.85	3.37	3.12	0.01**
Low self-control	Q3	8.31	2.48	7.45	2.02	2.60	0.01**
Emotional Instability	C	4.97	1.96	5.34	1.47	-1.47	Ns***
Suspicion	L	4.07	1.39	3.64	1.30	2.21	0.05*
Apprehension	O	11.59	3.43	9.52	3.19	4.31	0.01**
Tension	Q4	9.82	2.58	8.73	2.70	2.86	0.01**

* $P < 0.05$ = Significant ** $p < 0.01$ = highly significant ***Ns= nonsignificant

Discussion

It is widely believed that stress has an important role in triggering psoriasis and that the mechanism of stress-induced exacerbations of psoriasis involved the nervous, endocrine and immune systems.⁷ Stress can also alter the epidermal permeability barrier,⁸ and a barrier

abnormality might facilitate the development or persistence of inflammatory skin diseases through activation of an epidermal-initiated cytokine cascade.⁹ The body's response to stress is mediated by hypothalamus, pituitary, cerebral cortex, and the limbic system, in addition to the adrenal gland, as proposed by

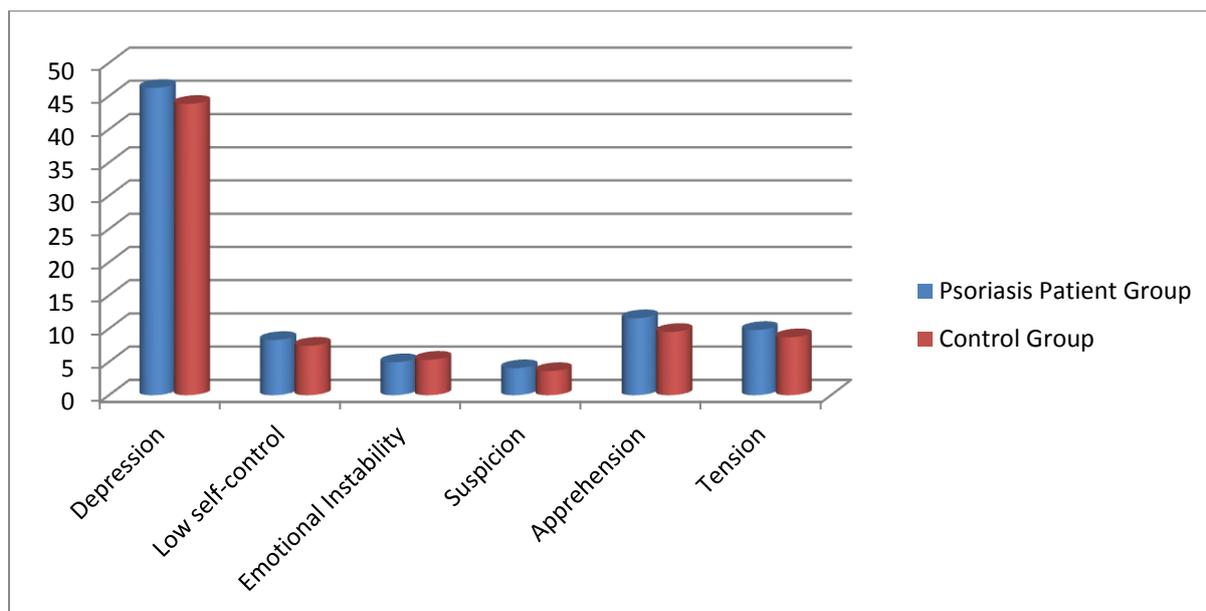


Figure 1 Graphical representation of means of different components of depression and anxiety of psoriasis patients group and control group

Selye.¹⁰ In addition to classic stress response involving increased levels of neuroendocrine hormones and autonomic neurotransmitters,¹¹ stress also affects the immune system. In humans, stress results in decreased levels of natural killer-cell cytotoxicity, depressed mitogenic responses in lymphocytes, increased serum immunoglobulin A levels, enhanced neutrophil phagocytosis, and activation of interferon synthesis in lymphocytes.¹²

Psoriasis patients show more depression as compared to the control group mainly because of cosmetic disfigurement of the exposed areas, moderate to intense pruritus and inhibition to attend social gatherings. Other studies^{6,13,14} also support our results which found that psoriasis produces significant adverse effects on the psychological and social aspects of life, mainly because of its visibility. Fortune *et al.*¹⁵ reported that psoriasis-related stress has been associated with greater psychiatric morbidity as patients who feel stigmatized in social situations have higher depression scores. Psoriasis patients usually develop low body image, which leads to social withdrawal, severe depression, and sometimes active suicidal attempts.¹⁶ The severity of

depression tends to correlate directly with the area of skin involved and severity of symptoms such as pruritus.¹⁷⁻²¹

The results of the present study clearly revealed that the psoriasis patients lacked foresight and self-control and showed altered and socially unacceptable character responses. They had little regard for social reputation and were inconsiderate to others. These patients as compared to patients with other chronic skin disorders were more anxious, apprehensive, impatient and easily taken aback. Another study²² concluded a similar type of finding that psoriasis sufferers felt self-conscious, disturbed/inconvenienced by the shedding of the skin. The psoriasis patients used to get annoyed by a greater number of things than the average person. They were less cohesive, low on morale and developed a feeling of insecurity. The psoriasis patients in our study showed psychological instability and always remained worrisome about how others view their disease. They developed a feeling of inferiority mainly because of physical uneasiness. They had low confidence levels and were not strong enough to face the

challenges of life. Similar studies support our findings by concluding that psoriasis patients suffered from low self-esteem, rating themselves as unattractive and sexually undesirable.^{23,24}

In general, the patients suffering from psoriasis were more tense and frustrated as compared to the patients suffering from other skin disorders, probably due to the inferiority complex as a result of the visible scaly lesions and also due to the recurrent and chronic nature of the disease. A study by Van Vorhees and Fried²⁵ also states that psoriasis patients suffer from psychological distress, especially as a result of stigmatization, self-consciousness and embarrassment which can in turn affect employment and social activities.

Overall, these results of our study support the view that psychiatric co-morbidity in psoriasis patients is mainly due to cosmetic disfiguring lesions, fear of rejection in matrimonial cases or at work and long course of the disease with remissions and relapses. Many studies are available worldwide showing prevalence and association of stress, anxiety and depression with psoriasis but none compared depression and the variables of anxiety in psoriasis with other chronic skin disorders. Our study is a small effort in establishing that the psoriasis patients are more depressed, tense, apprehensive and suspicious and have less self-control as compared to patients suffering from other chronic skin disorders, although they are emotionally as unstable as the control group.

Conclusions

The clinical manifestations play a significant role in triggering or exacerbating psychological stress in chronic dermatological diseases. Our study suggests role of relaxation therapy and psychotherapy for the

management of chronic skin diseases such as psoriasis. Increasing social support might help to reduce the exacerbations of psoriasis. A major shortcoming in our study was that we did not measure the depression, stress or anxiety caused by routine or daily problems. Such patients are hereby advised to take social and emotional support along with the medication for better control & reduced morbidity due to the disease.

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