



ORIGINAL RESEARCH PAPER

Psychiatry

PSYCHIATRIC MORBIDITY IN PATIENTS WITH PSORIASIS AND TINEA VERSICOLOR A COMPARATIVE STUDY

KEY WORDS: Psoriasis, Tinea versicolor, Psychiatric morbidity

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ABSTRACT

Background: Psycho-dermatology is a collaborate field of activity that is based on the relationship and interaction between Psychiatry and Dermatology, and in practice this collaboration may have different application. To assess the prevalence of the Psychiatric morbidity in patients with Psoriasis, to correlate them with stressors, personality profile and physical variables, to compare them with patients with Tinea versicolor and to know their clinical relevance.

Method: Patients should fulfill the criteria for Psoriasis and Tinea Vesicolor, according to International classification of Disease – 10th Revision, included as cases and controls respectively. The tools used to evaluate the patients were 1.Proforma, 2.Mini-International Neuro psychiatric Interview, 3.Socio-economic status scale, 4.Presumptive Stressful life events scale, 5.Hostility and Direction of Hostility Questionnaire, 6.Eysenck's Personality questionnaire, 7.Hospital Anxiety and Depression Scale, 8.Psoriasis Areas and Severity Index (PASI).

Results: From this study, it has been found that psychiatric morbidity is higher in psoriasis patients. Depression and anxiety disorder are the common psychiatric illness in them. Psoriasis patients had high neuroticism and higher total hostility. Higher psychosocial stressors may predispose to psychiatric illness, our study show significant increase in psychiatric morbidity in those with higher psychosocial stressors and life events.

Conclusion: Based on the findings in our study, it is understandable that dermatological patients have a high risk of psychiatric illness and when emotional factors are not addressed adequately, the morbidity of these patients may increase.Early recognition and treatment of psychiatric illness by involving Psychiatrist as a team member in the dermatology clinic may lead to a better outcome. Further studies to characterize pattern of psychiatric morbidity and their impact on daily living and longitudinal studies to observe improvement with pharmacotherapy and psychotherapy are necessary.

1. INTRODUCTION

Psycho-dermatology is a collaborate field of activity that is based on the relationship and interaction between Psychiatry and Dermatology, and in practice this collaboration may have different applications. Skin is the most visible organ which determines to a great extent our appearance and plays a major function in social communication and sexual attractiveness.Thus, the skin condition may have a considerable impact on the patient's well being. The prevalence of psychiatric disorders in the patients presenting to dermatology clinic has been reported as 25-43%.

Psoriasis is a chronic, relapsing skin disease presenting with erythematous, scaling papules, and indurated plaques, arising preferentially on the elbows, knees, and scalp. It occurs in 2 to 3% of the general population. It affects male and female patients equally. Approximately one third of the patients have a positive family history. Psoriasis has bimodal peak of onset, at age 22.5 years and again at age 55 years. The onset of psoriasis before the age of 15 years is associated with a higher prevalence of positive family history of psoriasis and with more severe disease. Psoriasis can involve the skin, scalp, and nails. Skin lesions are characterized by erythematous macules, papules, or plaques that are usually covered with silvery scales.

A large study reported that 33 percent of patients noticed new lesions at times of distress. The majority of these patients felt that it was the disease-related stress from cosmetic disfigurement and social stigma, rather than stressful major life events that led to exacerbation of symptom.

Tinea Versicolor

Tinea Versicolor (TV) is a common superficial fungal infection of the skin characterized by scaly, hypo or hyper pigmented lesions most commonly affecting the trunk and upper aspects of the arms.

It is caused by a non dermatophyte dimorphic fungus a normal inhabitant in the skin. As the yeast form *Pityosporum orbiculare*, it generally does not cause disease (except for folliculitis in certain individuals). Tinea versicolor is most often diagnosed based on clinical appearance. The typical lesions consists of oval scaly macules, papules, and patches concentrated on the chest, shoulders, and back, but only rarely on the face or distal extremities. On dark skin they appear hypopigmented and on light skin appear hyper pigmented. The disease has a relapsing nature, and may require repeated treatment.

2. Psychiatric Aspects of Psoriasis and Tinea

The disturbances in body image perception and the effect of psoriasis on interpersonal, social and occupational functioning can further contribute to the overall morbidity, especially if psoriasis first occurs during a developmentally critical period like adolescence.

Patients with psoriasis have higher levels of anxiety, depression, stressful life events and alexithymia as compared to normal subjects, and patients with fungal skin infections. The prevalence of mental disorders was significantly higher in psoriatic group (62.5%). Among that, affective disorders were found in all cases especially severe depression.

There is a significant correlation with clinical extent of psoriasis and other measures of psychological distress. Patients with late onset psoriasis (>40 years) had more prominent symptoms of depression compared with the early onset psoriasis (<40yrs).

Major depressive disorder is one of the most commonly encountered psychiatric disorders in dermatology patients. Depression may increase the sensation of itching in pruritic skin disorder such as atopic dermatitis, psoriasis, and chronic idiopathic urticaria. Age between 18 to 45 years in both sexes had more problems related to both appearance, socialization and occupation and finances. Restlessness, irritability and impatience had been found to be high in the scores. Women tend to have higher depression (56.9%) than men (44.8%) but men had more anxiety disorder (22.4%) compared to women with Anxiety disorder (16.9%)

Tinea Versicolor

Tinea have tendency to start at spring and possible impact on the individual's body image.Although the lesions easily respond to treatment, discoloured patches exist under the healing lesions and lesions tend to recur every summer. Therefore these patients might experience discomfort regarding physical appearance related to the disease which might have an impact on their physical status, even resulting in psychiatric disorders. Anxiety Disorder and Depressive disorder are the common psychiatric disorders in patients with Tinea versicolor.

From the background of these studies, it emerges that a study of psychiatric morbidity in patients with psoriasis and Tinea versicolor

and to correlate them with stressors, hostility, personality profile and physical variables will help in better understanding these disorders; early identification and prompt treatment of psychiatric morbidity by pharmacological and psychotherapeutic interventions which will reduce morbidity and improve quality of life.

3. METHODOLOGY

The sample was chosen from patients attending Dermatology outpatient clinic. Thirty patients diagnosed as Psoriasis by Dermatologist who satisfied the inclusion and exclusion criteria were chosen as Index Group for the study. Thirty patients diagnosed as Tinea Versicolor were selected, who satisfied the inclusion and exclusion and by matching for age and sex with the index group, as control group.

INCLUSION CRITERIA

1) Patients should fulfill the criteria for Psoriasis (IC D10L40.0) and Tinea Versicolor (ICD10B36.0), were included as cases and controls respectively. 2) Patients should be between age group of 18-65 years. 3) Patients should be willing and cooperative and who gave consent were included for the study.

EXCLUSION CRITERIA 1) Patients who have comorbid medical illness in the present or any medical illness in the past. 2) Patients who have other dermatological diseases including atopic dermatitis. 3) Patients who have suffered from any past psychiatric illness or substance dependence or mental retardation or dementia. 4) Patients who have received any psychiatric treatment currently.

OPERATIONAL DESIGN

The study was conducted from the period of January 2010 to September 2010. Patients who attended Dermatology Outpatient Clinic were chosen. Patients diagnosed as Psoriasis and Tinea versicolor by dermatologist based on International Classification of Disease 10th Revision were chosen as Index group and Control Group respectively. Details of socio-demographic profile were collected followed by thorough evaluation of physical status including detailed neurological examination. Mental status examination was done. Blood, urine and biochemical screening tests were done to rule out organicity. Patients were assessed in two sessions on two consecutive days.

The tools used to evaluate the patients were 1.Proforma 2.Mini-International Neuropsychiatric Interview. 3. Socio-economic status scale. 4. Presumptive Stressful life events scale. 5. Hostility and Direction of Hostility Questionnaire. 6. Eysenck's Personality questionnaire. 7. Hospital Anxiety and Depression Scale. 8. Psoriasis Areas and Severity Index (PASI)

STATISTICAL DESIGN

Statistical Design was formulated using the data collected as above. For each of the scales and socio-demographic variables, the central values [arithmetic Mean] and Dispersion tendencies [Standard Deviation] were calculated. In comparison of the data, for categorical variables Chi square and for numerical variables Student 't' test were used. For knowing the significance of psychopathological attributes correlation matrix were used.

RESULTS AND INTERPRETATIONS

Table Showing Comparison Of Illness Related Variables, Stressors And Personality Profile In Patients With Psychiatric Morbidity In Both Groups

S No	Variable	Index Group (N=20)	Control Group (N=11)	Statistical Analysis
1.	PSLE Scoring	<200 201-250 >251	8 1 5 0	$\chi^2 = 12.38^*$
2.	PSLE Events	<4 >5	6 14 8 3	$\chi^2 = 5.23^{**}$
3.	Personality Profile	Psychoticism	8 1	$\chi^2 = 3.29$

4.	PASI	Extro version	7	10	$\chi^2 = 8.95^*$
		Neuroticism	7	0	$\chi^2 = 4.97^*$
		Normal	4	0	$\chi^2 = 31^*$
		Severe	16	0	

*P < 0.05, **P < 0.01

Table shows, on comparison of Life Events Number index group with morbidity 14(70%) scored above 5 Life Events when compared with 8(72.7%) in control group with psychiatric morbidity scored below 4 life events. The difference was statistically significant. Regarding PSLE scoring 11(55%) scored >251 scoring in index group whereas in control group 6(54.5%) scored <200 scoring. The difference was statistically significant. Among psoriatic patients, 8(40%) scores on psychoticism, 7(35%) scores on neuroticism, remaining 7(35%) scores on extra version when compared to 10(90.9%) had extraversion profile in control group. The difference was statistically significant. With regard to neuroticism profile, 7(35%) scoring index group compared to none in control group. The difference was statistically significant.

TABLE Showing Comparison Of Age, Stressor, Hostility, Duration And Psychological Symptoms In Patients With Psoriasis And Psychiatric Morbidity

Sl No	Variable	Psoriasis with Psychiatric Morbidity (n=20)		Psoriasis without Psychiatric Morbidity (n=10)		't'
		Mean	S.D.	Mean	S.D.	
1.	Age	43.95	13.77	43.90	9.81	-0.01
2.	Duration of illness	6	6.25	4	2.78	-0.95
3.	HDHQ-Total Hostility	23.80	6.16	24.40	7.61	0.23
4.	HDHQ-Direction of Hostility	3.95	11.11	7.50	14.26	0.75
5.	PSLE-Scoring	298.95	177.73	163.10	128.59	-2.38*
6.	PSLE – Events	6.45	3.45	4.20	3.04	-1.74
7.	HADS – Anxiety Symptoms	8.35	3.55	3.50	2.27	-3.91*
8.	HADS-Depressive Symptoms	13.05	5.62	4.20	4.84	-4.24*
9.	HADS-Total Symptoms	21.40	6.87	7.70	4.34	-5.72*

*p<0.05

Regarding life events scoring (Mean 298.95 ± 177.73) in index group and control group (Mean 163.10 ± 128.59) the difference which was statistically significant. Regarding psychiatric symptoms, anxiety score (Mean 8.35 ± 3.55) Vs (3.50 ± 2.27) depressive (Mean 13.05 ± 5.62 Vs 4.20 ± 4.84) and total score (21.40 ± 6.87 Vs 7.70 ± 4.34) has been high in patients with psychiatric morbidity and the difference show statistical significance.

TABLE Showing Comparisons Of Age, Stressor, Hostility, Duration And Psychological Symptoms In Patients With Psychiatric Morbidity In Both Groups

Sl No	Variable	INDEX GROUP		CONTROL GROUP		't'
		Mean	S.D.	Mean	S.D.	
1.	Age	43.95	13.77	42.45	7.95	0.33
2.	Duration of illness	6.00	6.25	2.63	1.56	2.27*
3.	HDHQ-Total Hostility	23.80	6.16	23.90	3.23	-0.06*

4.	HDHQ-Direction of Hostility	3.95	11.11	11.90	7.94	-2.30
5.	PSLE-Scoring	298.95	177.73	185.0	29.8	2.79*
6.	PSLE – Events	6.45	3.45	4.00	0.77	3.03*
7.	HADS – Anxiety Symptoms	8.35	3.55	10.27	2.28	-1.82
8.	HADS – Depressive Symptoms	13.05	5.62	10.36	3.44	1.64
9.	HADS –Total Symptoms	21.40	6.87	20.63	2.90	0.43

*p<0.05

Table shows, on comparison of duration of illness. Longer duration of illness increases the risk of psychiatric morbidity in Index group, difference show statistically significance. Psoriasis patients presenting with psychiatric illness, have high total hostility, life events scoring and life events compared to Tinea patients and all these differences show statistical significance.

Correlation Matrix Of Age, Duration, Stressors, Hostility And Psychological Symptoms In Patients With Psychiatric Morbidity In Index Group

	Q1	Q2	Q3	Q4	Q5	Q6	Q7	Q8	Q9	Q 10
Q1	1									
Q2	0.02	1								
Q3	-0.13	0.93	1							
Q4	-0.02	0.13	0.10	1						
Q5	-0.00	0.47	0.44	-0.03	1					
Q6	-0.01	0.28	0.32	0.09	0.38	1				
Q7	-0.01	0.47	0.47*	0.02	0.89	0.75	1			
Q8	-0.12	0.09	-0.01	-0.14	0.19	0.35	0.31	1		
Q9	-0.00	-0.14	-0.24	-0.39	-0.05	0.19	0.05	0.7	1	
Q10	-0.00	0.42	0.29	0.35	0.34	0.04	0.27	0.16	-0.17	1

*P < 0.05

**P<0.01

- Q1 - Age in years
- Q2 - PSLE Events
- Q3 - PSLE Scoring
- Q4 - Duration of Illness
- Q5 - HADS Depressive Symptoms
- Q6 - HADS Anxiety Symptoms
- Q7 - HADS Total Symptoms
- Q8 - HDHQ – Total Hostility
- Q9 - HDHQ – Direction of Hostility
- Q10 - PASI

Table shows based on correlation co efficient total number of Life Events and Life Events scoring significantly positively correlated with depressive symptoms, anxiety symptoms and total psychological symptoms based on HADS and severity of psoriasis based on PASI.

Duration of illness positively correlated with severity of psoriasis but negatively correlated with intra punitive hostility. Further analysis suggest depressive symptoms and total psychological symptoms based of HADS in patients with psoriasis significantly positively correlated with severity of psoriasis.

Further total hostility significantly correlated with Anxiety symptoms.

DISCUSSION

The study aimed to know the prevalence of psychiatric morbidity with psoriasis, to correlate them with stressors, personality profile and physical variables, to compare them with patients with Tinea versicolor.

Prevalence of psychiatric illness is psoriasis patients in this study was 66.7% which has been found to be high compared to previous studies. Comparison of prevalence rate of psychiatric illness in both groups in our study showed that psychiatric patients has higher prevalence rate which is statistically significant than the controls.

In this study, the findings suggest among patients with psoriasis, Dysthymic disorder and major depressive disorder together account for 43.3% is the most common type of illness followed by 23.3% had generalized anxiety disorder. Regarding type of illness in Tinea patients 20% had depression disorder and 16.7% had anxiety disorders. On comparison of type of illness across both groups there is higher rate of depression and anxiety disorder in psoriasis compared to Tinea patients, but the difference was not statistically significant.

Dermatological patients are at risk for anxiety and depression compared to regular population and there is need for considering emotional factors for effective management. Results of this study indicate 20% of patients in index group and 23.3% is control group had significant high anxiety score; this difference was statistically not significant. Where as in depressive symptoms 53.3% of patients in index group and 23.3% in control group scored high. This difference was statistically significant. The results of this study indicate psoriasis patients have higher psychological symptoms and more psychopathology, the findings which was also reflected in previous studies.

In this study regarding personality profile, psoriasis patients scored equal distribution in three dimensions (psychoticism, extraversion and neuroticism), whereas Tinea patients scored high in extraversion dimension. On comparison of both groups presenting with psychiatric illness score higher in neuroticism dimension and the difference was statistically significant. Further Tinea patients scored higher in extroversion dimension and the difference was statistically significant.

Regarding analysis of stressors, psoriasis group had significant number of life events and scoring compared to Tinea group. The difference was statistically significant.

On comparison of duration of illness in both index group and control group who presented with psychiatric illness, there is significant higher duration of illness in psoriasis patients. The trend indicate longer the duration of illness in index group increases the risk of psychopathology.

Direction of hostility towards self, psoriasis patients without psychiatric morbidity have higher scores compared with psoriasis patients with psychiatric morbidity but both variables does not show statistically significant difference. In our study, total hostility has been significantly correlated with anxiety symptoms but intrapunitive hostility significantly negatively correlated with duration of illness.

Regarding socio demographic variables and its correlation with psychiatric morbidity, the results obtained in the study albeit its limitations due to small sample size, demonstrate some important observations. Among psoriasis patients, 30% of patients between 31-50 years and 45% of patients above 51years had psychiatric illness, the difference was not significant compared to younger age as well as with control group. These findings suggest that as advances in age does not increase the risk of psychopathology in psoriasis.

In our study, the prevalence of psychiatric morbidity is higher in males (60%) than females in psoriasis patients. Whereas 9(81.8%) in Tinea were females. The difference was statistically significant.

A large section of sample population belonged to the lower middle socioeconomic status and in this study the majority of patients with psychiatric illness belonged to this category. One is tempted to make erroneous assumption that psychiatric illness is common in that class. Considering Government hospital caters to a large population belong to this category, the results cannot be generalized. On comparison of patients with both groups with

psychiatric morbidity and marital status, no significant differences were noticed in our study. The over representation of married subject in psoriasis group is a logical outcome of higher age, ensuring more changes of getting married as per the cultural norms (Kulhara et al 1998).

With regards to residence and educational status, both groups had equal distribution and showed no significant difference.

Correlation of physical variable like age, self directed hostility and psychological symptoms in both groups who presented with psychiatric morbidity and further statistical analysis, our study do not show correlation with psychiatric morbidity. But psychosocial stressors and number of life events significantly increases the risk of psychiatric morbidity in patients with psoriasis and both these variables have been found to be significantly scoring higher in patients with psoriasis compared to tinea.

From this study, it has been found that psychiatric morbidity is higher in psoriasis patients. Depression and anxiety disorder are the common psychiatric illness in them. Psoriasis patients had high neuroticism and higher total hostility. As age advances risk of psychopathology does not increase in psoriasis patients. Higher psychosocial stressors may predispose to psychiatric illness, our study show significant increase in psychiatric morbidity in those with higher psychosocial stressors and life events.

Based on the findings in our study, it is understandable that dermatological patients have a high risk of psychiatric illness and when emotional factors are not addressed adequately, the morbidity of these patients may increase. Early recognition and treatment of psychiatric illness by involving Psychiatrist as a team member in the dermatology clinic may lead to a better outcome. Further studies to characterize pattern of psychiatric morbidity and their impact on daily living and longitudinal studies to observe improvement with pharmacotherapy and psychotherapy are necessary.

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