

## PSORIASIS AND PSYCHIATRIC MORBIDITY: AN ASSESSMENT FROM A TERTIARY CARE CENTRE OF SOUTHERN RAJASTHAN INDIA

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### ABSTRACT

**Background:** Psoriasis patients also experience added financial burden because of workplace absence which adds up to the cost of treatment. Several other factors, including race, genetics, geographical variation, infection, injury smoking, diet, alcohol, and psychological issues in particularly emotional stress which plays important role in the pathology or potentiation of psoriasis. All these factors can modify or affect the outcome of treatment. **Material & Methods:** A total of 50 patients enrolled for the study, who was suffering from psoriasis, attended the dermatology (inpatient and outpatient) department of our hospital. These diagnosed patients with psoriasis were enrolled for the study by simple random sampling. The control group consisted of 50 healthy subjects without known clinical disease. **Results:** 32% of psoriatic cases had psychiatric morbidities in comparison to 6% of the healthy control. This was statistically significant ( $P < 0.001$ ). Participants with GHQ score  $\geq$ , were further compared by HADS Scale for the severity of anxiety and depression. It was found that cases had scored more than control on HADS Scale. This difference was however not statistically significant ( $P = 0.624$ ,  $P = 0.705$ ). **Conclusion:** Prevalence of psychological morbidities among the patients of psoriasis was found to be significantly more in comparison to healthy controls. There was a positive correlation found between the severity of psoriasis and psychological disorders. Cases of psoriasis with lesions at exposed parts of the body had more psychological disorders and poorer QOL.

**Keywords:** Psoriasis, psychiatric morbidity, anxiety, depression.

### INTRODUCTION

Chronic Psoriasis has complex etiology and is still not well known. It consists of a very complex range of pathogenetic mechanisms and etiological assumptions (1). Psychiatric disorders may be one of the several factors which may play a significant role in these mechanisms, as well as it also has important effects on its forecasts and the very illness. If these assumptions are true, then the need for a multidisciplinary approach to this disease for medical treatment is justified (2). Psoriasis is a noncontagious inflammatory, chronic, and disfiguring skin disease which had a 0.6%–4.8% of prevalence rate among the general population (3). Psoriasis is generally characterized by pain and itching which sometimes leads to specific psychological impairment; prevalence rates are

seen as high ranging from 20% to 44%, stigmatization experiences, and perception of poor health-related quality of life (4). These changes affect routine day-to-day activities; abolish social interactions, occupational performance, and sexual functioning. The above-stated changes may be related to extent of skin lesions and severity of disease (5). Psoriasis patients deal effectively with something difficult and they are often devastated.

Psoriasis patients also experience added financial burden because of workplace absence which adds up to the cost of treatment (6). Several other factors, including race, genetics, geographical variation, infection, injury smoking, diet, alcohol, and psychological issues in

particularly emotional stress which plays important role in the pathology or potentiation of psoriasis. All these factors can modify or affect the outcome of treatment (7).

The abovestated research theories for understanding the psychological, demographic, social, and psoriasis-related causes of psychiatric illness would help in improving the treatment outcome and improving the quality of life (8). Although there is vast literature available on psoriasis and its comorbidities, there is a different psychosocial situation in the developing countries because of the industrialization to scanty research work on this subject in India (9). Hence, we conducted the present study to elaborate on the association between psoriasis and psychiatric illness.

## MATERIALS & METHODS

The present case-control study was conducted at a tertiary care hospital. A total of 50 patients enrolled for the study, who was suffering from psoriasis, attended the Department of Dermatology, Venereology and Leprosy (inpatient and outpatient) of our hospital between January 2019 and June 2019. These diagnosed patients with psoriasis were enrolled for the study by simple random sampling. The control group consisted of 50 healthy subjects without known clinical disease. Institutional Ethics Committee Clearance was taken before the start of the study and written informed consent for the study purpose was obtained from all the patients. All the patients were subjected to a detailed clinical examination following pretested proforma and demographic data recorded such as age, gender, educational and marital status. A detailed history was taken from patients of both groups. Patients who aged less than 10 years of age, with previously diagnosed mental illness, had other major physical illness or any disability were excluded from the study. The severity of psoriasis and the extent of skin lesions were evaluated by the PASI scale. General Health Questionnaire-12 scale (GHQ-12) was applied to all the participants in the study. All the participants who scored  $\geq 3$  on a scale GHQ-12 were evaluated by the Hospital Anxiety and Depression (HADS) Scale and World Health Organization Quality of Life-BREF (WHOQOL-BREF) scale. The data were analyzed using MS Excel 2010, Epi Info v7, and SPSS v22.

## RESULTS

The present study consists of 50 patients with psoriasis and 50 healthy controls. The study and control groups were divided into two subgroups based on the GHQ-12 scale; score  $< 3$  and score  $\geq 3$ , indicating the presence of

psychological morbidities. It was found that 32% of psoriatic cases had psychiatric morbidities in comparison to 6% of the healthy control. This was statistically significant ( $P < 0.001$ ). Participants with GHQ score  $\geq$ , were further compared by HADS Scale for the severity of anxiety and depression. It was found that cases had scored more than control on HADS Scale. This difference was however not statistically significant ( $P = 0.624$ ,  $P = 0.705$ ). On the assessment of QOL, by WHOQOL-BREF scale all the controls scored above 80 while 6 of the cases scored below 80 indicating the impairment of QOL. This difference was however not statistically significant ( $P = 0.624$ ,  $P = 0.705$ ) [Table 1].

The present study reported a statistically significant association ( $P$  value = 0.04) association between (PASI score) severity of skin lesions and anxiety score. The present study reported a statistically insignificant ( $P > 0.06$ ) correlation between visibility of skin lesions and HADS anxiety and depression scales and WHOQOL-BREF QOL scores with GHQ score  $\geq 3$ . However, a trend toward higher depression perception and poorer QOL scores among patients with more exposed skin lesions than compared to unexposed skin lesions [Table 2].

**Table 1: Correlation of severity of anxiety, depression and QoL scores in Psoriasis cases and healthy control with GHQ score  $\geq 3$  (Original)**

Variable	Psoriasis Cases with GHQ $\geq 3$ (n=16)	Healthy Controls with GHQ $\geq 3$ (n=3)	Statistical significance
<b>HADS anxiety score</b>			
$\leq 7$	7	1	<b>.624</b>
$\geq 8$	9	2	
<b>HADS depression score</b>			
$\leq 7$	11	2	<b>.705</b>
$\geq 8$	5	1	
<b>QoL score</b>			
$\leq 79$	5	0	<b>.083</b>
$\geq 80$	10	3	

**Table 2: Correlation between the visibility of skin lesion and anxiety, depression, and QoL scores in cases of Psoriasis with GHQ score  $\geq 3$  ( $n=16$ ) (Original)**

Variable	Visibility of lesion		Statistical significance
	Unexposed	Exposed	
<b>HADS anxiety score</b>			
$\leq 7$	2	5	<b>.0157</b>
$\geq 8$	6	3	
<b>HADS depression score</b>			
$\leq 7$	6	5	<b>.500</b>
$\geq 8$	2	3	
<b>QoL score</b>			
$\leq 79$	2	2	

## DISCUSSION

In the present study, the application of the GHQ-12 scale to all the subjects, it was reported that the presence of psychological morbidities was significantly higher among cases (32% vs. 6%). Similar results were obtained in another study which was a large population-based cohort study conducted in Pennsylvania which reported a that upto 40% increase in the frequency of serious mental health morbidities among patients with psoriasis compared to the control group (10). A study conducted by Lakshmy et al in India reported that the correlation of psychological disorders was about 80% in the case group of psoriasis (11). In the present study, further estimation with HADS scores and WHOQOL-BREF score was applied to cases and controls with GHQ score  $\geq 3$ . The control group categorized with GHQ score  $\geq 3$  reported to had better QOL in comparison to the case group with GHQ score  $\geq 3$ . A study conducted by Lakshmy et al. reported that the QOL was significantly decreased in patients who had psoriasis with psychological disorders (11). These lower scores on WHOQOL-BREF scale in the case group may be because of their experienced social stigma, disturbing activities of daily living, and lack of social support.

The present study reported statistically insignificant results between severity of psoriatic skin lesions and high GHQ score. Although, there was a trend of the high number of cases with severe skin lesions having  $\geq 3$  scores on the GHQ Scale. The small sample size was certainly the cause of this statistically insignificant finding. A study conducted at Himachal Pradesh, India reported significantly raised psychiatric disorders with higher PASI scores. Anxiety scores were also reported to be higher among the age of 20–50 years because these cases were not yet habituated to the psoriatic manifestation (12).

The present study also reported a statistically significant correlation between PASI scores and anxiety scores. This can be explained by the extent of skin lesion and associated infiltration, erythema, and scaling cause worry to the patient about their appearance and disability which may lead to social embarrassment. The present study did not report a statistically significant relation between past score and depression score or QOL to score with GHQ score  $\geq 3$ . In our study, the patients with visible skin lesions in the exposed parts had higher depression scores and poorer QOL scores compared to lesions in unexposed areas. Detailed clinical history of patients who had psoriasis and healthy control group without psoriasis whose GHQ score was  $\geq 3$  reported that no participant of the control group had a syndromic psychiatric diagnosis as per ICD-10 criteria. Although, 5 out of 16 cases of psoriasis were found to be in this clinical criteria of psychiatric morbidity (13). These patients were at the end followed up in psychiatry OPD and treated with appropriate treatment.

## CONCLUSION

We concluded from the present study that the prevalence of psychological morbidities among the patients of psoriasis was found to be significantly more in comparison to healthy controls. There was a positive correlation found between the severity of psoriasis and psychological disorders. Cases of psoriasis with lesions at exposed parts of the body had more psychological disorders and poorer QOL.

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