

# Frequency and Magnitude of Anxiety and Depression in Patients with Psoriasis Vulgaris

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## ABSTRACT

**Objective:** To determine the frequency of anxiety and depression in patients with psoriasis.

**Study Design:** Cross-sectional study.

**Place and Duration of Study:** Outpatient Departments of Dermatology and Psychiatry, Ziauddin University Hospital, KDLB Campus, Karachi, from October 2005 to September 2006.

**Patients and Methods:** All patients presenting with psoriasis vulgaris above the age of 15 years, of either gender, fulfilling the selection criteria were included in the study. Clinical diagnosis was confirmed by biopsy and histopathology. Documentation of disease severity as mild, moderate and severe was done, using Psoriasis Area Severity Index (PASI). Patients were asked to fill "AKUADS" for their psychiatric assessment and scoring was done on this basis. Patients scoring equal to or above 19 were labeled as having anxiety or depression.

**Results:** There were 56 males (62%) and 33 females (38%), aged 20 to 65 years in the study. Out of those, 52 (58%) were married; while 37 (42%) were unmarried. The minimum duration of illness was 6 months and maximum 15 years. Thirty-four patients (38%) were suffering from mild disease, 31 (35%) from moderate and the remaining 24 (27%) from severe psoriasis. Twenty-four (27%) were on topical therapy while the other 65 (73%) were receiving systemic as well as topical therapy. Joint involvement was seen in 25 patients (28%) and nail changes in 31 (35%). Psychiatric illness was positive in 34 patients (38%,  $p < 0.05$ ) i.e. 20 males (59%) and 14 females (41%). Twenty-six patients (76%) were married ( $p < 0.05$ ). Anxiety and depression was seen irrespective of the disease duration. The mean "AKUADS" scores in accordance with disease severity were mild psoriasis 20, moderate psoriasis 22 and severe psoriasis 25. Twenty-one patients (62%,  $p = 0.05$ ) with joint involvement and another 23 (68%,  $p < 0.05$ ) with nail involvement had a score above 19. Thirty-one patients (91%) were receiving systemic as well as local therapy, while 3 patients (9%) were on topical treatment ( $p < 0.05$ ).

**Conclusion:** There is an association of psoriasis vulgaris with anxiety and depression. The magnitude of this anxiety and depression can be influenced by variables of disease and life.

**Key words:** Psoriasis. Anxiety. Depression. Psoriasis Area Severity Index (PASI).

## INTRODUCTION

Psoriasis is a chronic disease with extensive and disfiguring lesions, the course being punctuated by remissions and relapses. Such patients often present with physical disability, social discomfort and psychological disorders. The embarrassment, stigma and social anxiety caused by the illness often lead to relational conflicts, emotional distancing, isolation and depression affecting the quality of life.

Psoriasis patients reacting to stress function less well in terms of mental health and experience more disabilities in everyday life. The impact of psoriasis on occupational, social and other areas of functioning is substantial and needs attention.<sup>1</sup> Significant levels of anxiety and depression have been reported in patients

with psoriasis in several international studies.<sup>2,3</sup> Various questionnaires have been used from time to time to determine the psychiatric effects of psoriasis. However, these questionnaires do not allow comparison with other groups. The choice of questionnaire differs according to the type of disease and the setup in which study is done. "AKUADS" is a simplified Urdu proforma, facilitated the rate of psychiatric caseness to be calculated for the current study.<sup>4,5</sup> The self-administered questionnaire comprises of questions covering psychiatric and somatic aspects.<sup>6,7</sup> A maximum score of 75 can be achieved by this proforma; however, those who score 19 or above are labeled as suffering from anxiety and depression.

The current study was aimed to determine the frequency and magnitude of anxiety and depression using AKUADS in patients with psoriasis.

## PATIENTS AND METHODS

The study was conducted in the Outpatient Department of Dermatology, Ziauddin University Hospital, KDLB Campus, Karachi, from October 2005 to September 2006, over a period of one year. The study was

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Received April 7, 2007; accepted April 22, 2008.

conducted in collaboration with the department of Psychiatry, Ziauddin University. Clinically diagnosed cases of psoriasis vulgaris, fulfilling the selection criteria, were enrolled for the study. All patients presenting with psoriasis above the age of 15 years belonging to either gender were included in the study. Patients suffering from psoriasis vulgaris, on any form of therapy i.e. systemic or topical, having nails or joints involved and who could complete "AKUADS" were included in the study.

Patients with other subtypes of psoriasis, having any concomitant dermatological or systemic disease, any psychiatric disease or subnormal mentality and those receiving etretinate therapy were excluded.

The purpose of the study and questionnaire were explained to each patient and a written consent was taken. After a detailed history, general, systemic and dermatological examination was done. The clinical diagnosis was confirmed by biopsy and histopathology. Documentation of disease severity was done using Psoriasis Area Severity Index (PASI).<sup>8</sup> The severity of the disease was graded as mild, moderate and severe. Patients were asked to fill "AKUADS" for their psychiatric assessment and scoring was done on this basis. Patients scoring equal to or above 19 were labeled as having anxiety or depression. All the patients with scores above 19 were reassessed by psychiatrist.

All the findings were recorded, compiled and tabulated. Chi-square test was applied for statistical analysis and a p-value equal to or <0.05 was considered significant.

## RESULTS

A total of 89 patients fulfilling the inclusion criteria were included in the study. There were 56 males (62%) and 33 females (38%). The minimum age of presentation was 20 years and maximum 65, age range was 45 years, mean age being 36.3 years (mean SD  $\pm$  10.2). Of the enrolled subjects, majority were young aged between 15 - 45 years, accounted for 75% of all the patients. Remaining 25% of the enrolled patients aged between 46 - 65 years.

Of the enrolled patients, 52 (58%) were married, comprising 30 males (34%) and 22 females (24%) while 37 (42%) patients were unmarried. The minimum duration of the illness was 6 months and maximum was 15 years.

Thirty-four patients (38%) were suffering from mild disease, 31(35%) from moderate and the remaining 24 (27%) patients from severe psoriasis. The descending frequency of the sites of involvement were trunk (64%), limbs (68%), scalp (40%), palms (29%) and soles (23%).

Of all these patients, 24 (27%) were on topical therapy while the other 65 (73%) were receiving systemic as well as local therapy. Joint involvement was a feature in

25 patients (28%). Backache was reported in 18 (20%) and knee joints were involved in 7 patients (8%). Nail changes were observed in 31 patients (35%).

Psychiatric caseness was positive in 34 patients (38%,  $p < 0.05$ ). Table I shows the variables influencing the AKUADS score. There were 20 males (59%) and 14 females (41%). Twenty-six patients (76%) were married, while 8 patients (24%) were unmarried ( $p < 0.05$ ). Among married cases, 16 were males (47%) and 10 females (29%). There were 4 unmarried males (12%) and an equal number of females. Anxiety and depression was seen in patients with the minimum duration of disease as well as with maximum duration. Among 34 patients with positive psychiatric caseness, 6 had mild disease (18%), 12 suffered from moderate psoriasis (35%) while remaining 16 (47%) presented with severe psoriasis ( $p < 0.05$ ). The mean scores in accordance with the disease severity were 20 in mild psoriasis, 22 in moderate and 25 in severe. Twenty-one patients (62%,  $p < 0.05$ ) with joint involvement and another 23 (68%,  $p = 0.05$ ) with nail involvement had a score above 19. Among the patients with positive psychiatric caseness, 31 patients (91%) were receiving systemic as well as local therapy, while 3 patients (9%) were only on topical treatment ( $p < 0.05$ ).

**Table I:** Patients with AKUADS score above 19 significance with variables (n=34, 38%).

Variables	n	%	p-value
Gender			
Males	20	59	< 0.05
Females	14	41	
Marital status			
Married	26	76	< 0.05
Unmarried	8	24	
Disease severity			
Mild	6	18	
Moderate	12	35	< 0.05
Severe	16	47	
Joint involvement	21	62	< 0.05
Nail involvement	23	68	= 0.05
Therapy			
Topical	3	9	<0.05
Topical/systemic	31	91	

## DISCUSSION

Psoriasis is a chronic disfiguring disease, often associated with physical disability, social discomfort and psychological disorders. It is important to consider this association in overall management of psoriasis. Psoriasis patients react to stress, function sub-optimally in terms of mental health and experience more disabilities in everyday life. In order to consider the psychiatric co-morbidity, an appreciation for the effects of gender, age, marital status, duration and severity of disease and distribution of lesions is important, as well as the bi-directional relationship between skin disease and psychological distress.<sup>9</sup>

Anxiety and depression remain the most common psychiatric disorders in patients with dermatological disorders.<sup>10,11</sup> Gupta *et al.* have confirmed the association of anxiety and depression with psoriasis.<sup>2,3</sup> Various questionnaires have been used, from time to time to determine the psychological effects of psoriasis.<sup>12</sup> In the current study, "AKUADS" (Aga Khan University Anxiety and Depression Scale) was used. This simplified Urdu Proforma facilitated the rates of psychiatric caseness to be calculated for the current study. The degree of psychiatric co-morbidity in dermatological patients varies in accordance with the setting of a study; disease itself and the scale used.<sup>13</sup>

A total of 89 patients were included in the current study. Psychiatric caseness was positive in 38% patients. Rohini *et al.* found depression in 67% of their patients suffering from psoriasis.<sup>15</sup> Aslam *et al.* have reported a frequency of more than 60% in patients with psoriasis as far as anxiety and depression are concerned.<sup>16</sup>

Sixteen females constituting 42.5% of the enrolled 33 ladies had a higher frequency of anxiety and depression compared to 35.8% of the initially enrolled 56 males. No sex preponderance has been reported in a few other studies done in the past.<sup>8,17</sup>

In the current study, anxiety and depression was reported significantly more in married cases (76%) compared to unmarried ones. Mattoo *et al.*<sup>8</sup> reported a similar finding in his study.

There was a high frequency of positive psychiatric caseness in patients with severe psoriasis (47%) compared to the ones with moderate or mild disease i.e. 35% and 18% respectively ( $p < 0.05$ ). Therefore, the increase in severity of psoriasis leads to an increasing frequency of anxiety and depression. Ozguvan *et al.* have also confirmed the influence of severity of psoriasis on anxiety and depression.<sup>18</sup> This is in contrast to the report by Fortune *et al.* who claimed that severity of the disease did not influence the magnitude of anxiety and depression in patients with psoriasis.<sup>17</sup> However, Akay *et al.* and John de Korte *et al.* found a direct correlation of severity of the disease with psychiatric morbidity.<sup>19,20</sup> Therefore, the findings in this study are in agreement with past studies.<sup>18-20</sup>

Anxiety and depression was seen irrespective of the duration of the disease as well. However, Fried *et al.* claimed that the magnitude of anxiety and depression was proportional to the duration of psoriasis.<sup>1</sup> Esposito *et al.* found an influence of duration on psoriasis associated anxiety and depression.<sup>21</sup> Kilic *et al.* could not comment on the association of anxiety and depression with duration of the disease.<sup>22</sup>

Among the patients with positive psychiatric caseness, 31 patients (91%) were receiving systemic as well as

local therapy, while 3 patients (9%) were only on topical treatment ( $p < 0.05$ ). Thus, in the current study, patients on topical therapy only had a less frequency of anxiety and depression compared to the ones receiving systemic or combination therapy. Thus, the increasing severity of disease requiring more extensive therapy leads to a higher degree of positive psychiatric caseness.<sup>10</sup> Thus, the finding is consistent with the past study.

In the current study, it was observed that the involvement of joints and nails can also influence the frequency of anxiety and depression in patients with psoriasis. Twenty-one patients (62%,  $p < 0.05$ ) with joint involvement and another 23 (68%,  $p = 0.05$ ) with nail involvement had a score above 19. Joint and nail involvement, therefore, is another variable to be considered for determining the magnitude of anxiety and depression in psoriasis patients.

Thus, clinical variables of the disease and sociodemographics influence the extent of anxiety and depression in patients with psoriasis.

The study was confined to those patients who were suffering from psoriasis vulgaris. Thus, correlation of anxiety and depression with other variants of psoriasis cannot be determined. In addition, subtypes of depression cannot be depicted by such scales. The scale simply screens out the patients with anxiety and depression. Moreover, the results of such studies can vary from one study to another depending upon the clinical setting and scale used. Therefore, the results of such studies cannot be compared. This is the first study of its kind in our country as far as psoriasis is concerned, conducted on a smaller scale. Further studies are required in this regard on a larger scale. Keeping in mind the discrepancies in literature, the cause and effect of relationship between environmental, personality, psychopathological and psychiatric variables remains open to investigation.

The scale AKUADS, used in this study has been utilized in various studies done in the past.<sup>3-7, 23-25</sup> Therefore, it can also be considered a useful screening and diagnostic tool to assess the psychiatric caseness in patients with dermatological disorders.

## CONCLUSION

There is an association of psoriasis vulgaris with anxiety and depression. The magnitude of this anxiety and depression can be influenced by variables of disease like severity, distribution of lesions, duration of illness and nail and joint involvement. On the other hand, variables of life like age, gender and marital status also influence psoriasis associated anxiety and depression.

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