Common Psychiatric Disorders amongst Patients with Psoriasis: A Tertiary Hospital Based Case Control Study

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Abstract: Background: Psoriasis is a common, genetically determined inflammatory and proliferative disease of the skin. Psychological stress can exacerbate the disease. Objectives: This study sought to investigate the depression and anxiety disorders among patients with psoriasis and control group. Material and Methods: This study was a comparative case-control study. It included 100 psoriatic patients who were compared to 100 controls. The patient group was recruited from the outpatient clinic of dermatology department of Shri Guru Ram Rai Institute of Medical and Health Sciences (SGRRIM &HS), Dehradun and diagnosed by a consultant and specialist dermatologists. The sample includes both sexes, ageing from 20 to 50. Results: From One-hundred patients in each group, 57 were male (50 control) and 43 were female (50 control). Depression score was 78% and 20% in psoriatic patients and control, respectively. The Beck depression inventories (BDI) of patients with psoriasis were significantly higher than scores of the control group \(P < 0.001\). Anxiety symptoms scored on BAI also revealed higher values than controls, with a highly statistically significant value \(p<0.001\). Conclusion: The results revealed that psoriatic patients reported significantly higher degrees of depression and anxiety than controls. Understanding their diverse mechanisms of coping can give them a better chance for a more comprehensive and beneficial management plan.

Keywords: Psoriasis, Anxiety, Depression

1. Introduction

Psoriasis is an immune mediated genetically determined common dermatological disorder which affects skin, nails, joints and has various systemic associations. There is evidence that the disease is associated with a high impact on the health-related quality of life and considerable cost [1]. Two-peak age of onset was considered for the disease; the early age of onset is between 16–22 years, and latent age of onset is between 57–60 years. The incidence of psoriasis in adult men and women and among different races is equal. However, females tend to develop the disease earlier than males. There are several classes of psoriasis including: psoriasis vulgaris, guttate psoriasis, generalized pustular psoriasis, disseminated erythrodermic psoriasis, scalp psoriasis, palms and soles psoriasis, nail psoriasis, arthropathic psoriasis, and verse psoriasis. It is believed that a combination of several factors contribute to the development of this disease. Genetic factors, trauma, infection, certain medicines, such as nonsteroid anti-inflammatory drugs (NSAIDs), betablockers, antimalaria medicine, and lithium, endocrine factors, sunlight, metabolic factors, alcohol, cigarette, and psychological factors have been found in development of psoriasis [2].

There is strongly clinical evidence that stress can play a role on the onset and exacerbation of psoriasis [3–6]. In a study on psoriatic patients, 60% of the patients strongly believed that stress was a causal factor for their psoriasis [7]. Psoriasis is associated with a variety of psychological problems. So, considering the psychosocial aspects of the disease is very important in psoriatic patients [8]. According to previous controlled studies, the prevalence of depression was ranged from 0 to 58% in psoriatic patients [4]. One study has demonstrated that female psoriatic patients appear to be more vulnerable to develop depression than males. The prevalence of anxiety is higher than depression in psoriatic patients. Even psoriatic patients have reported significantly higher degrees of anxiety than other chronic diseases such as cancers. Furthermore, the severity of anxiety would be greater in patients with palms and soles psoriasis [4].

Psoriasis is associated with a variety of personality disorders. On the other hand, psychological stress can induce resistance to regular psoriatic treatment and causes psoriasis to appear worse. In this view, psoriasis is an inflammatory disease with expensive and long-term therapies, and as mentioned before, psychosocial stress can exacerbate the disease. Therefore, we decided to compare depression and anxiety disorders in patients with psoriasis and the control group.
2. Aim and Objectives

The study aims at assessment of depressive and anxiety symptoms in patients with psoriasis and controls.

3. Materials and Methods

In this hospital-based case-control study, all participants were patients who referred to Department of Dermatology at Shri Guru Ram Rai Institute of Medical and Health Sciences (SGRRIM & HS), Dehradun between June 2014 and Dec 2014. The institutional ethics committee of SGRRIM & HS approved the study protocol. Written informed consent was obtained from all participants. Diagnosis of psoriasis was based on clinical examination by a dermatologist and confirmed by histological examination of the lesions by a pathologist.

It included 100 psoriatic patients who were compared to 100 controls. The sample includes both sexes, ageing from 20 to 50. All patients did not have past or current history of seeking psychiatric help. Patients suffering from other dermatological diseases, medical conditions that would interfere with the assessment, mental sub-normality, past history of psychiatric disorders and substance use disorders, co-morbidity with other active major medical problems, and patients under oral or systemic corticosteroids medications were excluded. In the control group, thirty individuals were randomly selected from visitors of medical departments in Shri Guru Ram Rai Institute of Medical and Health Sciences (SGRRIM & HS), Dehradun, other than the psychiatric or dermatological departments. Individuals with physical disorders and patients’ relatives were excluded to avoid genetic influence. Both groups were matched for age, sex, education, occupation and marital status.

Both groups were subjected to the application of the case history of psychiatry department of SGRRIM & HS to obtain socio-demographic and relevant clinical data. Psychiatric diagnosis was following the DSM-IV-TR (Diagnostic and Statistical Manual of Mental Disorders – IV, Text Revised) criteria (American Psychiatric Association, 2000). The following psychometric tools were applied:

A- Beck Depression Inventory (BDI) (Beck, et al. 1988) [9]: It is a self-report scale designed to assess the severity of symptoms of depression. The inventory is composed of 21 groups of statements on a 4-point scale from which the subject selects the best matching to his or her current state. Each statement group corresponds to a specific behavioral manifestation. Responses are scored 0-3, corresponding to “no, mild, moderate or severe depressive symptoms”.

B- Beck Anxiety Inventory (BAI) (Beck, et al. 1988) [10]: It is a self-report scale for assessment of the severity of anxiety symptoms. It includes 21 items scored on a 0 to 3. Scoring range varies from 0 to 63, where higher scores indicate greater anxiety severity.

All data from both groups were computed and conducted on the SPSS (Statistical Package for Social Sciences, version 17) software for statistical analysis. Student T-test and Mann Whitney U test were used for continuous variables such as age and education. Chi-square test was used for qualitative variables such as scores on BDI and BAI. Both approaches were combined to illustrate findings from different perspectives. Probability level (P value <0.05) was considered statistically significant.

4. Results

There were 100 patients (57 males (50 controls) and 43 females (50 controls)) in the case and control groups. Their age range was between 20 and 50 with a mean of 39.50±7.9 and 37.80±6.9 in case and control, respectively. In the control group, 4% were students, 26% were housewives, 29% were professional, and 32% were skilled workers. The occupational status in the case group was as follows: unemployed 9.0%, student 1%, housewives were 30% and 15%, 38% were professional and skilled workers respectively. There was no evidence for chronic diseases such as hypertension, diabetes, asthma, and rheumatic disorders in history of the patients in the case and control groups. There was no history of drug users in either of the studied groups. Ninety-nine (99%) were on topical therapy while the other one (1%) were receiving systemic as well as topical therapy. (Table 1, 2)

Ninety-five (95%) were plaque psoriasis (psoriasis vulgaris), three (3%) guttate [GUH-tate] psoriasis, one (1%) inverse psoriasis, and one (1%) pustular psoriasis. There was no evidence of erythrodermic psoriasis or psoriasis arthritis. Duration of the disease was less than one year among all the psoriatic patients.

Table 1: Demographic characteristics of cases and controls

<table>
<thead>
<tr>
<th>Biosocial characteristic</th>
<th>Psoriasis</th>
<th>Control</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age</td>
<td>39.5 ±7.9</td>
<td>37.8 ±6.9</td>
<td>0.345</td>
</tr>
<tr>
<td>Education</td>
<td>7.1 ±5.1</td>
<td>8.1 ±5.3</td>
<td>0.217</td>
</tr>
</tbody>
</table>

Table 2: Socio demographic characteristics of cases and controls

<table>
<thead>
<tr>
<th>Biosocial characteristic</th>
<th>Psoriasis</th>
<th>Control</th>
<th>P value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sex</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>57 ±57</td>
<td>50 ±50</td>
<td>1.020</td>
</tr>
<tr>
<td>Female</td>
<td>43 ±43</td>
<td>50 ±50</td>
<td></td>
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<tr>
<td>Marital status</td>
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<td>0.987</td>
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<tr>
<td>Single</td>
<td>18 ±18</td>
<td>20 ±20</td>
<td></td>
</tr>
<tr>
<td>Married</td>
<td>80 ±80</td>
<td>77 ±77</td>
<td></td>
</tr>
<tr>
<td>Divorced</td>
<td>02 ±02</td>
<td>03 ±03</td>
<td></td>
</tr>
<tr>
<td>Occupation</td>
<td></td>
<td></td>
<td>0.125</td>
</tr>
<tr>
<td>Unemployed</td>
<td>09 ±09</td>
<td>05 ±05</td>
<td></td>
</tr>
<tr>
<td>Student</td>
<td>01 ±01</td>
<td>04 ±04</td>
<td></td>
</tr>
<tr>
<td>Housewife</td>
<td>30 ±30</td>
<td>26 ±26</td>
<td></td>
</tr>
<tr>
<td>Professional</td>
<td>15 ±15</td>
<td>20 ±20</td>
<td></td>
</tr>
<tr>
<td>Skilled</td>
<td>38 ±38</td>
<td>32 ±32</td>
<td></td>
</tr>
<tr>
<td>Manual</td>
<td>07 ±07</td>
<td>04 ±04</td>
<td></td>
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</table>
Psoriasis is a chronic skin disease that has been significantly linked to psychiatric symptoms and disorders. Our study results reveal that 78% of the psoriatic patients have psychiatric diagnoses according to DSM-IV-TR criteria (American Psychiatric Association, 2000). Many studies support the view that dermatological conditions carry a high degree of psychiatric morbidity varying from 10 to 90% (Woodruff, et al. 1997; Bharath, et al. 1997; Mehta and Malhotra, 2007 and Saleh, et al. 2008) [11-14]. Variation in prevalence of psychiatric disorders could be related to sample size, patient selection, duration of illness, or psychometric measures with different cut off scores.

The relation between mood disturbances and psoriasis was highlighted by the results of the current study. All comorbid psychiatric disorders fall in the affective spectrum. Assessment of depressive symptoms using BDI revealed higher statistically significant depressive scores among the patients than in the control group. Many studies have supported this finding, although some of them did not go along with the quantification of the degree of depression. For instance, Akay, et al. (2002) [15] found less patients with severe degree of depression; 26%, versus 40% in the current study.

Among patients with psoriasis, there was a higher degree of anxiety than controls. This finding goes along with Richards, et al. (2001) [16] study where anxiety was identified in 43% of attendees at a tertiary clinic for psoriasis. In contrast, Devrimci-Ozguven, et al. (2000) [17] did not find elevated levels of anxiety associated with psoriasis; which was partly attributed to the low psoriasis severity scores that could have influenced their results. It could also be explained in view of the diversity of factors underlying the emergence of anxiety in psoriatic patients (Fortune, et al. 2002). [18]

### 6. Conclusion

There is a high frequency of psychiatric co-morbidities encountered in psoriatic patients. They show significant higher levels of anxiety and depression and they utilize specific coping processes. Understanding their diverse mechanisms of coping can give them a better chance for a more comprehensive and beneficial management plan.

### Acknowledgement

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### References


