

Depression among Egyptian patients with psoriasis attending Assiut University Hospital

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Aim

Psoriasis is an immune-mediated genetically determined common dermatological disorder. Psoriasis has the potential for significant psychological and social morbidity. Depression is the most common psychiatric disorder associated with psoriasis. The aim of this study was to evaluate depression among patients with psoriasis attending Assiut University Hospital.

Patients and methods

This was a cross-sectional study consisting of 100 patients with psoriasis who met the inclusion criteria. All eligible patients were subjected to the following tools: beck depression inventory, psoriasis disability index, and short form-36 quality of life questionnaire.

Results and conclusion

The results show that depression is highly significant among patients with psoriasis. The overall prevalence of depression was 76% among patients with psoriasis, and 60% of the patients presented with moderate and severe depression. There was a significant negative correlation between depression and quality of life. There was a significant positive correlation between depression and duration of psoriasis. Female sex and long duration of the disease were found to be risk factors for the occurrence of depression among patients with psoriasis.

Keywords:

beck depression inventory, depression, psoriasis, short form-36 quality of life

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Introduction

Psoriasis is an immune-mediated genetically determined common dermatological disorder that affects skin, nails, and joints and has various systemic associations. There is evidence that the disease is associated with increased effect on the health-related quality of life (QoL) and considerable cost [1].

Psoriasis is a persistent, disfiguring, and stigmatizing disease [2] affecting ~2–3% of the general population [3].

Psoriasis causes stress, and in turn, stress can worsen psoriasis. However, most patients with psoriasis who reported episodes of psoriasis precipitated by stress describe disease-related stress, resulting from the cosmetic disfigurement and social stigma of psoriasis [4].

Psoriasis is associated with a variety of psychological problems. Psoriasis impairs ability in everyday activities requiring use of hands; walking, sitting, and standing for long periods of time; occupational performance; sexual activities; and sleep. So, considering the psychosocial aspects of the disease is very important in patients with psoriasis [4].

A systematic review found that the prevalence of depression in patients with psoriasis ranged from 9 to 62% [5].

On the contrary, psychological stress can induce resistance to regular psoriasis 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, psychological stress can exacerbate the disease. Therefore, recognition and treatment of psychosocial problems can decrease health care costs and shorten the therapeutic period [6].

The aim of the study was to evaluate depression among patients with psoriasis attending Assiut University Hospital (AUH).

Patients and methods

Patients

This is a cross-sectional study that included 100 patients with psoriasis (65 male and 35 female patients) who attended the Dermatology Department

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(Ultraviolet Unit and Outpatient Clinics) of AUH from 1 July 2015 to 31 May 2016.

Patients with psoriasis had been chosen from both sexes, and their ages ranged from 18 to 65 years; moreover, they had more than 10% body surface area involvement, as determined by a dermatology physician using the psoriasis area severity index [7].

Methodology

All eligible patients were subjected to the following tools:

- Beck depression inventory (BDI) [8], Arabic version [9]: this inventory scale was used for measuring depression. It was translated into Arabic by Gharib Abdel Fattah *et al.* in 2000. BDI is a self-reported scale designed to assess Diagnostic and Statistical Manual of Mental Disorders-IV defined symptoms of depression. The inventory consists of 21 groups of statements on a four-point scale with the participant selecting the one that best matches the patient's current state. Each statement group corresponding to a specific behavioral manifestation response is scored as 0–3, corresponding to no, mild, moderate, or severe depressive symptomatology in the response. The score range varies from 0 to 63, where higher scores indicate greater depression severity. Scores in the range of 0–13 indicate no or minimal depression; 14–19, mild depression; 20–28, moderate depression; and 29–63, severe depression.
- Psoriasis disability index (PDI) [10], Arabic version [11]: the PDI is a widely used instrument to measure the effect of psoriasis on patients and was translated into Arabic by Professor Hatem Zidan Mohamed *et al.* in 2014.

It is self-explanatory and can be handed to the patients to fill it in without the need for a detailed explanation. The PDI can be analyzed under five headings as follows: daily activities – questions 1, 2, 3, 4, and 5; work or school – questions 6, 7, and 8; personal relationship – questions 9 and 10; leisure – questions 11, 12, 13, and 14; and treatment – question 15.

The scoring of each question is answered in a series of four answers: not at all (scores 0), a little (scores 1), a lot (scores 2), and very much (scores 3). The PDI is calculated by summing the score of each of the 15 questions, resulting in a maximum of 45 and a minimum of 0. The higher the score, the more the QoL is impaired and can also be expressed as a percentage of the maximum possible score of 45.

- Short form-36 QoL questionnaire (SF-36) [12], Arabic version [13]: the SF-36 was designed

as a generic indicator of health status for use in population surveys and evaluative studies of health policy. It can also be used in conjunction with disease-specific measures as an outcome measure in clinical practice and research. As a generic instrument, the SF-36 was designed to be applicable to a wide range of types and severity of conditions.

The SF-36 includes 36 items, in a Likert-type or forced-choice format, intended to measure the following eight dimensions; scores for each domain range from 0 to 100, with high scores indicating a better status [14].

Statistical analysis

Data entry and data analysis were done using SPSS version 19 (statistical package for the social sciences; SPSS Inc., Chicago, Illinois, USA).

Ethical considerations

This study was approved by the Institutional Ethics and Research Committee of the Faculty of Medicine, Assiut University, Assiut, Egypt. An informed oral consent was obtained from all the patients.

Results

A total of 100 patients with psoriasis were analyzed. Their mean age was 42.10 ± 13.86 years, and 65% were male. The mean duration of psoriasis in the studied sample was 8.02 ± 5.11 years, and 64% of the patients had the disease with less than 10 years of duration.

Table 1 shows that the mean score of BDI in the studied sample was 24.55 ± 10.27 (9.0–43.0), and 60% of the patients presented with moderate and severe depression, whereas 24% show no depression.

Table 2 shows a statistical significant positive strong correlation among BDI and PDI in the studied sample.

Table 3 shows that there was a statistical significant positive correlation between duration of psoriasis and BDI and PDI (i.e. there was a higher cumulative probability for patients with psoriasis with longer duration of psoriasis to have depression and higher disability).

Table 4 shows that there was a statistical significant negative strong correlation between BDI and all subscales of short form-36. This means that the increase in severity of depression is associated with decrease in QoL.

Table 5 shows that the logistic regression model, and the odd's ratio of developing depression was significantly higher among female sex (odds ratio: 4.315).

Discussion

Psoriasis affects patients socially, emotionally, and professionally [15], and the prevalence of mental disorders was four times higher in patients

Table 1 Frequency of the severity of depression in the studied sample according to Beck depression inventory

Beck depression inventory	n (%)
Normal	24 (24.0)
Mild	16 (16.0)
Moderate	18 (18.0)
Severe	42 (42.0)
Mean±SD	24.55±10.27

Table 2 Correlation between Beck depression inventory and psoriasis disability index in the studied sample

	Beck depression inventory
PDI	
<i>r</i>	0.312
<i>P</i>	0.002**

PDI, psoriasis disability index. ***P*<0.01, significant difference.

Table 3 Correlation between duration of psoriasis and Beck depression inventory and psoriasis disability index in the studied sample

	Duration of psoriasis (years)	
	<i>r</i>	<i>P</i>
Beck depression inventory	0.376	0.000**
Psoriasis disability index	0.322	0.001**

***P*<0.01, significant difference.

Table 4 Correlation between Short form-36 subscales scores and Beck depression inventory and psoriasis disability index in the studied sample

SF-36 subscales	Beck depression inventory		Psoriasis disability index	
	<i>r</i>	<i>P</i>	<i>r</i>	<i>P</i>
Physical functioning	-0.662	0.000**	-0.528	0.000**
Role physical	-0.616	0.000**	-0.474	0.000**
Bodily pain	-0.642	0.000**	-0.447	0.000**
General health	-0.640	0.000**	-0.487	0.000**
Vitality	-0.681	0.000**	-0.456	0.000**
Social functioning	-0.704	0.000**	-0.424	0.000**
Role emotion	-0.624	0.000**	-0.348	0.000**
Mental health	-0.669	0.000**	-0.479	0.000**

SF-36, shortform-36. ***P*<0.01, significant difference.

Table 5 Risk factors for depression (Beck) in the studied sample by multiple logistic regression analysis

	<i>P</i>	OR	95% CI	
			Lower	Upper
Age	0.221	1.066	0.962	1.180
Sex (female)	0.019*	4.315	1.266	14.713

CI, confidence interval; OR, odd's ratio. **P*<0.05, significant difference.

with psoriasis than in patients with other skin diseases [16].

With respect to marital state, the mean of depression among patients with psoriasis was significantly higher among divorced and widowed compared with single and married patients. These findings are in partial agreement with one study (studied the prevalence of depression in 1407 Black women recruited through the National Black Women's Health Project) in USA which illustrated that single and divorced women showed significantly higher levels of depression compared with women who were married [17]. It is possible that the huge burden of physical illness in the absence of a supportive partner, together with the social burden in our community, contribute toward the higher mean of depression among divorced and widowed.

The duration of illness in patients with psoriasis in this study ranges from 1 to 22 years, with a mean years and a SD of 8.02 ± 5.11 years which is in agreement with another study that was done in Egypt that showed the duration of illness in patients with psoriasis ranged from 1 to 28 years, with mean ± SD of 9.3 ± 7.97 years [18].

The present study found an overall prevalence of depression of 76% in patients with psoriasis, of which 60% had moderate and severe depression that would require psychiatric intervention. In a previous study, the Beck depression questionnaire indicated that 67 and 12% of the patients in the case and control groups had depression, respectively [4].

When the BDI scores were assessed on the basis of mild, moderate, and severe depression, we found that 16% of the patients with psoriasis had scores corresponding to mild depression, 18% to moderate depression, and 42% to severe depression. This is similar to the study done in Egypt where 16.7% of the patients with psoriasis had scores corresponding to mild depression, 16.7% to moderate depression, and 43.3% to severe depression [18].

The present study was in agreement with another study carried out on 100 patients with psoriasis, which revealed that 40% of patients with psoriasis had severe depression on BDI, 19% had moderate depression, and 19% had mild depression. Depression was absent in 22% [6].

In contrast to the current study, a pilot study on psychiatric morbidity of psoriasis, it was described that 90% of patients with psoriasis had some depression. It revealed that 68% of the patients with psoriasis had mild depression, 18% had moderate depression, 4%

had severe depression, and 10% had minimal or no depression [19].

Moreover, another study carried out on 50 patients with psoriasis in Turkey did not agree with our results and found that most patients had scores corresponding to moderate depression (32%) whereas 26% corresponded to severe depression [20]. The difference between the two studies may be interpreted by the different social, educational, and economic factors in addition to the different medical care and the early diagnosis of depression owing to better screening and effective referral system.

In a previous study on epidemiology of depressive disorders among patients attending outpatient clinics of AUHs, of 2304 studied individuals, 202 (8.8%) patients reported depressive disorders [21], whereas in the present work, we found the overall prevalence of depression to be 76% in patients with psoriasis, of which 42% had severe depression that would require psychiatric intervention. This result confirms the high prevalence of depression in patients with psoriasis compared with the general attendants.

The findings of the present study were in agreement with a previous one which revealed that there was a positive correlation between the total duration of psoriasis and the total depression score ($r = 0.382$, $P = 0.000$). The predictive relationship between the duration of psoriasis and the absolute scores of depression was statistically significant ($P = 0.000$ and 0.007 in arrangement). Consequently, there is a higher cumulative probability for patients with longer duration of psoriasis to have a severe grade of depression [22].

There is convincing evidence that depression plays an important role in the QoL in patients with psoriasis. This study found that there is a statistically significant negative correlation between BDI and QoL scale in all its subscales. This means that the increase in the severity of depression is associated with a decrease in QoL. These findings are consistent with the study carried out on 50 Egyptian patients with psoriasis using rating scales for psychopathological health status and QoL scale that found there is a strong association between psychiatric morbidity and poorer QoL in psoriasis [23].

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Conflicts of interest

There are no conflicts of interest.

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