Identification of anger and self-esteem in psoriasis patients in a consultation-liaison psychiatry setting: a case control study

Ersin Aydin, Guldehan Atis, Abdullah Bolu, Cigdem Aydin, Ercan Karabacak, Bilal Dogan and Mehmet Alpay Ates

Abstract

Objective: Psoriasis is one of the most common chronic skin diseases, which has a negative impact on the interpersonal relationship and psychosocial well-being. Therefore, psoriasis may lead to a decrease in the self-esteem of the patients. Increased level of anger often accompanies patients with psoriasis. Our aim is to investigate the relationship of anger, anger expression style and level of self-esteem in patients with psoriasis and to determine whether duration and severity of disease affects anger, anger expression style and level of self-esteem. In addition, we aimed to compare the level of self-esteem in patients with early and late onset of psoriasis.

Methods: Eighty-five patients with psoriasis and 86 healthy controls were included in the study. Severity of disease was calculated with Psoriasis Area and Severity Index (PASI). The patients were classified as early-onset (age < 20 years) and late-onset psoriasis (age ≥ 20 years). Duration of disease and socio-demographic characteristics were recorded. State-Trait Expression Inventory for Anger (STAXI) and Rosenberg Self-esteem Scale (RSES) were used for determining anger, anger expression style and level of self-esteem.

Results: Trait anger, state anger and anger-in scores were statistically significantly higher in patients with psoriasis (p < .05). Anger-out and anger-control scores were similar in both groups. RSES scores were statistically significantly higher in the psoriasis group (p < .05). There was a negative weak statistically significant correlation between RSES and anger-control scores (r = −.246, p = .027). A positive, weak, statistically significant correlation was found between RSES scores and anger-out scores (r = .224, p = .045). A positive, mild, statistically significant correlation between duration of the disease and anger-in scores (r = .277, p = .027) was detected in patients with psoriasis whereas no statistically significant correlation between the other parameters and duration and severity of the disease was detected. No significant difference was detected when patients with early- and late-onset psoriasis were compared in terms of self-esteem (p = .722). A positive, mild, statistically significant correlation between duration of the disease and anger-in scores (r = .277, p = .027) was detected in patients with psoriasis whereas no statistically significant correlation between the other parameters and duration and severity of the disease was detected.

Conclusion: Reduced self-esteem and increased anger levels are remarkable in psoriasis patients. While evaluating and arranging treatment of psoriasis patients, it should be considered that psoriasis is not only a dermatological disease, but also a disease resulting in reduced self-esteem and increased anger level; therefore dermatologic and psychiatric approaches should be taken with the patients.

Introduction

Psoriasis is a chronic, autoimmune, systemic disease having an approximate prevalence of 1–3% in different populations [1]. Although psoriasis is classified biologically as an autoimmune disease, emotional stress and psychological factors may play a role as predisposing or triggering factors in disease onset and course; therefore, psoriasis is referred to as a psychosomatic disease [2,3]. Many studies have demonstrated the relationship between psychological factors and severity of disease [4,5]. These studies suggested that detecting of psychological factors and treatment of underlying psychiatric disorder are important factors for improving psoriasis [2,3,6]. All data pointed out that psoriasis plays an important role in consultation-liaison psychiatry (CLP) consult requests. As the disease damages the physical appearance, it affects the social status and may cause stigmatization [7]. In fact, stigmatization...
is more common in patients with psoriasis than patients with other dermatological diseases [8]. Furthermore, it is believed that this issue leads to decreased self-esteem level in patients with psoriasis [9,10].

Self-esteem is closely associated with physical appearance and dissatisfaction with body image may lead to anger in these patients. Therefore, anger frequently accompanies psychodermatologic diseases such as psoriasis [11,12]. In fact, increased anger levels frequently accompanying psychiatric disorders has been also studied in patients with psoriasis and increasing level of anger was noted in several studies [13,14]. It was found that anxiety, insecurity and aggressive behaviors were more common especially in patients with early-onset psoriasis [5,10,14–16]. However, the correlation of anger and anger expression styles with self-esteem in psoriasis which is a psychosomatic disease has not been studied before. Thus, we aimed to investigate the relationship of anger and anger expression style with level of self-esteem in patients with psoriasis and to find out whether the duration and severity of the disease have an effect on the anger and anger expression style and self-esteem as well as to compare the levels of self-esteem in patients with early-onset and late-onset psoriasis.

Methods

Subjects

Eighty-five patients with psoriasis who presented at the dermatology outpatient clinic enrolled in the study. A control group consisting of 86 healthy volunteers with similar age, gender and education level to the patients enrolled in the study. All individuals were required at least to be literate and to be able to fill out the psychometric scales. Patients with psychiatric treatment history and psychiatric disorder were not enrolled in the study. Furthermore, patients with psoriatic arthritis were excluded from the study.

Assessment of psoriasis patients

Patients had a detailed dermatology examination by the dermatologist and Psoriasis Area and Severity Index (PASI) was calculated in order to determine the severity of the disease. Patients whose psoriasis had started before 20 years of age were classified as those with early-onset psoriasis whereas patients whose psoriasis had started at 20 years and over 20 years of age were classified as those with late-onset psoriasis.

Data collection

Durations of disease and socio-demographic characteristics were recorded. Patient and control groups were asked to fill out the forms of Trait Anger Expression Inventory (STAXI) and Rosenberg Self-Esteem Scale (RSES) in a quiet room.

Trait Anger Expression Inventory: It is a scale consisting of 34 clauses that is filled by the participants and used for measuring anger and the way of showing the anger. It has subscales such as trait anger, anger-in and anger-out determining, anger control and anger expression type. The participant is asked to choose the most appropriate expression among “none,” “a little,” “very” and “completely.” It was developed by Spielberger. The reliability and safety study was performed by Ozer in Turkey [17,18].

Rosenberg Self-Esteem Scale: It is a multiple-choice test consisting of 63 clauses that is filled by the participants. The first 10 questions were prepared to measure self-esteem. The reliability and safety study was performed by Cuharadaroglu in our country. In the self-esteem subscale, 0–1 grade shows high level of self-esteem whereas 2–4 grades show middle and 5–6 grades show low self-esteem [19,20].

Statistical analyses

All statistical analyses were performed using SPSS for Windows, Version 15.0. T test was used in the comparison of numeric values. The correlation between STAXI, RSES and other clinical characteristics was studied with Pearson correlation analysis. Statistical significance was accepted as <0.05.

Ethical issues

The local Ethics Committee of the GATA Haydarpasa Training Hospital approval was obtained in 2012.

Results

Eighty-five patients with psoriasis (14 females, 71 males) were enrolled in the study. Eighty-six volunteers (19 females, 67 males) were involved in the control group. Patients with psoriasis were similar to the control group in terms of age, gender, marital status and educational level (Table 1).

Trait anger, state anger and anger-in scores were statistically significantly higher in patients with

| Groups | Psoriasis | Control | Statistical analysis | p-Value |
|--------|-----------|---------|----------------------|---------|
| Age (mean ± SD) | 32.15 ± 11.63 | 32.41 ± 9.77 | t = 0.350 | .727 |
| Gender (%) | | | | |
| Female | 83.5 | 16.5 | | |
| Male | 78 | 22 | | |
| Marital status (%) | | | | |
| Married | 35 | 43 | | |
| Single | 65 | 57 | χ² = 1.073 | .301 |
| Duration of education (year, mean ± SD) | 9.98 ± 3.54 | 10.07 ± 3.82 | t = 0.106 | .916 |

Note: SD: standard deviation; t: student t test; χ²: chi square; p: statistically significance level.
psoriasis (respectively, \( t = 3.684, \ t = 2.070, \ t = 2.840; \ p < .05 \)). No difference was detected between the two groups in terms of anger-out and anger-control scores. When the two groups were compared in terms of self-esteem, the RSES scores were statistically significantly higher in psoriasis patients compared to the control group; so level of self-esteem is statistically significantly lower in patients with psoriasis \( (t = 2.138; \ p < .05) \) (Table 2).

|      | Control   | Statistical analysis | \( p \)-Value |
|------|-----------|----------------------|--------------|
| Trait anger | 23.13 ± 6.44 | 19.56 ± 5.10 | \( t = 3.684; <0.001 \) |
| State anger  | 23.60 ± 4.68 | 22.21 ± 3.51 | \( t = 2.070 \) 0.040 |
| Anger-in     | 17.53 ± 4.89 | 15.50 ± 3.52 | \( t = 2.840 \) 0.005 |
| Anger-out    | 16.04 ± 4.83 | 15.46 ± 4.31 | \( t = 0.769 \) 0.443 |
| Anger control | 21.44 ± 6.37 | 19.51 ± 5.18 | \( t = 0.310 \) 0.757 |
| RSES         | 1.03 ± 0.74  | 0.80 ± 0.53  | \( t = 2.138 \) 0.034 |

Note: RSES: Rosenberg self-esteem scale; SD: standard deviation; \( t \): student test; \( p \): statistically significance level.

There was a negative, weak correlation between RSES scores and anger-control scores \((r = 0.246, \ p = 0.027)\). A positive, weak correlation was found between RSES scores and anger-out scores \((r = 0.224, \ p = 0.037)\) (Table 3). A positive, mild correlation between duration of the disease and anger-in scores \((r = 0.277, \ p = 0.027)\) was detected in patients with psoriasis whereas no correlation between the other parameters and duration and severity of the disease was detected (Table 4). Twenty-seven patients had early-onset psoriasis whereas 39 patients had late-onset psoriasis. No significant difference was detected when patients with early- and late-onset psoriasis were compared in terms of self-esteem \( (p = 0.722)\).

### Discussion

There are two important results in our study. Firstly, patients with psoriasis have lower self-esteem than the control group. Secondly, we detected a weak positive correlation between level of anger-out and self-esteem scores and a negative weak correlation between anger control and self-esteem scores in patients with psoriasis. This means that lower level of self-esteem led to increased anger-out. Also the patients with low level of self-esteem have difficulty in showing anger control.

As 30% of the patients who visit the dermatology out-patient clinic have psychiatric and psychologic morbidity [21], dermatologists often suggest psychiatry consultation. Patients with psoriasis are more vulnerable to develop psychiatric disorder than patients with other dermatological diseases [3]. A study from Turkey found that psychiatry consultations were requested for 16.4% of patients who presented to the dermatology out-patient clinic. 93.3% of the patients were diagnosed as having a psychiatric disorder. 15.5% of the patients with psychiatric disorder have psoriasis vulgaris in this study [22]. There may be numerous reasons for the presence of psychiatric morbidity in patients with psoriasis. Our study may contribute to a better understanding of these reasons, just because anger and self-respect were not evaluated together in other studies.

A healthy and normal looking skin has a big significance in terms of the physical and mental health and plays an important role in the self-confidence improvement [23,24]. Psoriasis leads to negative results in the daily life of patients and mostly effects the self-esteem of the patients negatively as the disease requires repeating treatment, leads to cosmetic problems, has negative effects on sleep, causes complaints like pain, itching and the responses to treatment occasionally are not sufficient [10]. Especially, early-onset skin disorders may lead to much lower self-esteem. Moreover, a low self-esteem may be accompanied by psychopathological conditions such as depressive moods, psychosomatic diseases and psychic isolation [25]. In our study, we found that patients with psoriasis have lower level self-esteem level than the control group; however, no significant differences were detected between the self-esteem levels of early- and late-onset patients with psoriasis.

This may have several reasons. Self-esteem, which is an important factor for making satisfying and right choices in individuals’ lives, is gained in the late adolescent period (18–24 years of age) and it is believed that high self-esteem is a protecting factor in coping with new life events and chronic disease [26,27]. In our study, more negative effects may not be observed on the high self-esteem improvement in patients with

| Table 2. Comparison of anger-anger expression style scores and self-esteem scores in groups. |
|------------------------------------------|----------------|----------------|-----------------|-----------------|-------------------|
| Psoriasis (mean ± SD) | Control (mean ± SD) | Statistical analysis | \( p \)-Value |
| Trait anger | 23.12 ± 6.44 | 19.56 ± 5.10 | \( t = 3.684 \) <0.001 |
| State anger  | 22.60 ± 4.68 | 21.22 ± 3.51 | \( t = 2.070 \) 0.040 |
| Anger-in     | 17.53 ± 4.89 | 15.50 ± 3.52 | \( t = 2.840 \) 0.005 |
| Anger-out    | 16.04 ± 4.83 | 15.46 ± 4.31 | \( t = 0.769 \) 0.443 |
| Anger control | 21.34 ± 6.37 | 19.51 ± 5.18 | \( t = 0.310 \) 0.757 |
| RSES         | 1.03 ± 0.74  | 0.80 ± 0.53  | \( t = 2.138 \) 0.034 |

Note: RSES: Rosenberg self-esteem scale; SD: standard deviation; \( t \): student test; \( p \): statistically significance level.

| Table 4. Relationships with RSES scores, PASI and duration of disease in the patient group. |
|------------------------------------------|----------------|-----------------|-----------------|-----------------|-------------------|
| RSES | PASI | Duration of disease |
| \( r \) | \( p \) | \( r \) | \( p \) | \( r \) | \( p \) |
| Trait anger | 0.090 | 0.441 | 0.027 | 0.074 |
| Anger-in | \( r \) 0.148 | \( p \) 0.212 | 0.027 |
| Anger-out | \( r \) 0.119 | \( p \) 0.316 | 0.227 |

Note: RSES: Rosenberg Self-Esteem Scale; PASI: psoriasis area and severity index; \( r \): correlation coefficient; \( p \): statistically significance level.

| Table 3. Relationships with RSES scores and anger and anger expression style scores in the patient group. |
|------------------------------------------|----------------|-----------------|-----------------|-----------------|-------------------|
| RSES | Anger-in | Anger-out | Trait anger | Anger control |
| \( r \) | 0.185 | 0.224 | 0.191 | \( -0.246 \) |
| \( p \) | 0.098 | 0.045 | 0.084 | 0.027 |

RSES: Rosenberg self-esteem scale; \( r \): correlation coefficient; \( p \): statistically significance level.
early-onset psoriasis compared to patients with late-onset psoriasis, since our study divided the patients as < 20 years of age and ≥ 20 years of age. This result may show a positive effect on the patients for coping with a chronic disease like psoriasis. In the light of the literature when considering our findings, we suggested that while evaluating and arranging treatment of psoriasis patients in CLP or psychiatry outpatient clinic, self-esteem, self-reliance and personality trait may be taken into consideration for diagnosis and treatment efficacy.

Furthermore, we detected that lower self-esteem level led to increased anger-out and anger control is damaged in patients with low self-esteem in our study. Anger is a very universal human feeling which is developed in cases where the wishes and requirements of the individual are not fulfilled, his/her plans do not come true, and when he/she perceives a threat against him/herself [28]. In the presence of a disease like psoriasis which results in loss of function and occasionally leads to insufficiencies in fulfilling the requirements of the individuals, the increase of anger is possible. In our study, state anger, trait anger and anger in levels were found higher in patients with psoriasis compared to the healthy group. Similarly, in a study performed by Sampogna et al. the anger levels were found higher in patients with psoriasis than the ones in the healthy control group and as a difference it has been suggested that they are associated with the severity of the disease [29] Similarly to our study, in a local study reviewing anger and type of anger expression in psoriasis patients, trait anger and anger-in levels were found higher in psoriasis patients than in the control group [14]. Conrad et al. showed in their study that trait anger, state anger, anger-in and anger-out levels are higher in patients with psoriasis [13]. Our results indicate that individuals’ self-esteem affects anger expressions. We thought that these results may guide the evaluations of patients’ physiopathology. This evaluation may be helpful in treatment strategies of pharmacologic and non-pharmacologic therapies.

Our study has some limitations. One of the limitations of the study is limited number of patients. This study could have been performed with a larger number of patients. Secondly, long-term follow-up could have been performed, which may allow detecting the effect of treatment on self-esteem and anger expression style.

Conclusion

In our study, decreased self-esteem and increased anger levels in psoriatic patients are noteworthy. We thought that dermatologic and psychiatric approaches as a whole should be provided to the patients to increase the therapy effect and success while evaluating and arranging treatment of psoriatic patients. All these results show the importance of the collaboration of dermatology out-patient clinics and CLP units.

Disclosure statement

No potential conflict of interest was reported by the authors.

References

[1] Atakan N, Dogan S. Psoriasis, a systemic disease? Turkish J Dermatol. 2012;6(3):119–122.
[2] Aydemir EH, Sukan MY. Psychosomatic factors and psychologic status in psoriatic patients and approach to the psoriatic patients. Turkderm. 2008;42(Suppl. 2):S26–S30. Turkish.
[3] Rieder E, Tausk F. Psoriasis, a model of dermatologic psychosomatic disease: psychiatric implications and treatments. Int J Dermatol. 2012;51(1):12–26.
[4] Sampogna F, Tabolli S, Abeni D. The impact of changes in clinical severity on psychiatric morbidity in patients with psoriasis: a follow-up study. Br J Dermatol. 2007;157(3):508–513.
[5] Devrimci-Ozguven H, Kundakci TN, Kumbasar H, et al. The depression, anxiety, life satisfaction and affective expression levels in psoriasis patients. J Eur Acad Dermatol Venereol. 2000;14(4):267–271.
[6] Gupta MA, Gupta AK, Kirkby S, et al. Pruritus in psoriasis: a prospective study of some psychiatric and dermatologic correlates. Arch Dermatol. 1988;124(7):1052–1057.
[7] Hrehorów E, Salomon J, Matusiak L, et al. Patients with psoriasis feel stigmatized. Acta Derm Venereol. 2012;92(1):67–72.
[8] Donigan JM, Pascoe VL, Kimball AB. Psoriasis and herpes simplex virus are highly stigmatizing compared with other common dermatologic conditions: a survey-based study. J Am Acad Dermatol. 2015;73(3):525–526.
[9] Solovan C, Marcus M, Chiticariu E. Life satisfaction and beliefs about self and the world in patients with psoriasis: a brief assessment. Eur J Dermatol. 2014;24(2):242–247.
[10] Altunay IK, Atis G, Ejen K, et al. Impact of functional pruritus compared with mild psoriasis on quality of life: a cross-sectional questionnaire study in Turkey. Am J Clin Dermatol. 2014;15(4):365–370.
[11] Altinoz AE, Taskintuna N, Altinoz ST, et al. A cohort study of the relationship between anger and chronic spontaneous urticaria. Adv Ther. 2014;31(9):1000–1007.
[12] Aldemir S, Erpolat S, Dalbudak E, et al. Anger, anxiety and depression in females with diffuse alopecia. Dicle Medical J. 2015;42(3):335–341. Turkish.
[13] Conrad R, Geiser F, Haidl G, et al. Relationship between anger and pruritus perception in patients with chronic idiopathic urticaria and psoriasis. J Eur Acad Dermatol Venereol. 2008;22(9):1062–1069.
[14] Gulec MY, Kilic A, Gul U, et al. Alexithymia and anger in patients with psoriasis. Arch Neuropsychiatry. 2009;46(4):169–174. Turkish.
[15] Doruk A, Tunca M, Koc E, et al. Alexitimia, anger-anger management style and temperament-character profiles in males with Alopecia areata and psoriasis.
Remröd C, Sjöström K, Svensson A. Psychological differences between early- and late-onset psoriasis: a study of personality traits, anxiety and depression in psoriasis. Br J Dermatol. 2013;169(2):344–350.

Spielberger CD, Jacobs G, Russell S, et al. Assessment of anger: the state-trait anger scale. In: Butcher JN, Spielberger CD, editors. Advances in personality assessment. Vol 2. Hillsdale, NJ: Lawrence Erlbaum Associates; 1983. pp. 161–189.

Ozer AK. Surekli Ofke ve Ofke Ifade Tarzi Olcekleri on calismasi. Turk Psikoloji Dergisi. 1994;9(31):26–35. Turkish.

Rosenberg M. Society and the adolescent self-image. Princeton (NJ): Princeton University Press; 1965.

Cuhadaroglu F. Adolesanlarda benlik saygısı. Yayımnamemmuş Uzmanlık Tezi, Hacettepe Üniversitesi Tıp Fak, Psikiyatri ABD, Ankara. 1986. Turkish.

Gupta MA, Gupta AK. Psychiatric and psychological co-morbidity in patients with dermatologic disorders: epidemiology and management. Am J Clin Dermatol. 2003;4(12):833–842.

Seyhan M, Aki T, Karincaoglu Y, et al. Psychiatric morbidity in dermatology patients: frequency and results of consultations. Indian J Dermatol. 2006;51(1):18–22.

Balaban OD, Atagun MI, Ozguven HD, et al. Psychiatric morbidity in patients with vitiligo. Dusunen Adam: The J Psychiat Neurol Sci. 2011;24(4):306–313.

Sukan M, Maner F. Vitiligo ve kronik ürtiker hastalardında kendilik saygısı. Türkiye’de Psikiyatri. 2006;8:93–97.

Ersan EE, Dogan O, Dogan S. The relationship between self-esteem levels and some sociodemographic characteristics of the students of college of physical education and sports. Klinik Psikiyatri Dergisi. 2009;12(1):35–42. Turkish.

Dalgard F, Gieler U, Holm JØ, et al. Self-esteem and body satisfaction among late adolescents with acne: results from a population survey. J Am Acad Dermatol. 2008;59(5):746–751.

Erturan I, Aktepe E, Didar-Balci D, et al. Evaluation of self-esteem and dermatological quality of life in adolescents with atopic dermatitis. Türkderm. 2013;47:39–44. Turkish.