Distress Levels and Psychopathologic Symptoms in Dermatology Patients

Dermatoloji Hastalarının Stres Düzeyi ve Psikopatolojik Semptomlar Yönünden Değerlendirilmesi

Fatma Gülru ERDOĞAN, MD,[a]
Gül Aslıhan ÇAKIR, MD,[a]
Atilla Halil ELHAN, MD,[b]
Aysel GÜRLER, MD[a]

[a]Department of Dermatology,
Ufuk University Faculty of Medicine,
[b]Department of Biostatiscially,
Ankara University Faculty of Medicine,
Ankara

Geliş Tarihi/*Received:* 12.01.2009
Kabul Tarihi/*Accepted:* 15.05.2009

Yazışma Adresi/*Correspondence:*
Fatma Gülru ERDOĞAN, MD
Ufuk University Faculty of Medicine,
Department of Dermatology, Ankara,
TÜRKİYE/TURKEY
gulruer@gmail.com

ABSTRACT Objective: Psychodermatologic diseases recently gained more attention and are believed to be treated only by a multidisciplinary approach. In this study, evaluating stress levels and psychopathologic symptoms of dermatology patients, with and without psychodermatologic diseases, compare their results within themselves and with controls is aimed. **Materials and Methods:** Study group included 348 patients admitting to dermatology policlinic and 148 age and sex matched controls. Brief Symptom Inventory is given to groups in a silent room. First patient and control groups, then patients with and without psychodermatologic diseases are compared within themselves and with controls. Finally, patients with distinct diagnoses are evaluated for psychopathologic symptoms. **Results:** Points of distress, somatization, obsession-compulsion, interpersonal sensitivity, hostility and paranoid ideation were higher in patients than controls. Acne patients had higher depression, anxiety, hostility and psychoticism; urticaria patients had higher depression, anxiety and somatization; eczema patients had higher anxiety and hostility; patients with idiopathic pruritus had higher anxiety and somatization points than controls. Besides, patients with psychodermatologic diseases had higher distress, depression, anxiety and psychoticism points than other patients and controls. **Conclusion:** Although points of dermatology patients on general distress and certain psychopathologic symptoms were higher, this difference is detected to originate from patients with psychodermatologic diseases for general distress, depression, anxiety and psychoticism points. Thus, evaluating patients for psychologic symptoms according to their diagnoses may give more reliable results. Some dermatologic diseases seem to be less related with psychologic symptoms. Multidisciplinary treatments may increase the chance of successful outcomes in patients with psychodermatologic diseases.

Key Words: Dermatology; stress, psychological; psychophysiologic disorders

ÖZET Amaç: Psikodermatolojik hastalıklar son yıllarda artan bir ilgiyle incelenmekte ve ancak multidisipliner bir yaklaşımla tedavi edilebilecekleri düşünülmektedir. Bu çalışmada, psikodermatolojik hastalığı olan ve olmayan dermatoloji hasta gruplarının genel stres düzeyi ve psikopatolojik semptomlar yönünden değerlendirilmesi, kendi aralarında ve sağlıklı kontrollerle karşılaştırılması amaçlanmıştır. **Gereç ve Yöntemler:** Çalışmaya dermatoloji polikliniğine başvuran 348 hasta ile yaş ve cinsiyet uyumlu 148 sağlıklı kontrol alındı. Gruplara Kısa Semptom Envanteri sakin bir ortamda uygulandı. Önce hasta ve kontrol grupları karşılaştırıldı. Daha sonra psikodermatolojik hastalığı olan-olmayan hasta grupları kendi aralarında ve kontrol grubu ile karşılaştırıldı. Son olarak hasta grupları psikopatolojik semptomlar yönünden değerlendirildi. **Bulgular:** Hasta grubunun stress, somatizasyon, obsesyon-kompulsiyon, kişilerarası duyarlılık, anksiyete, hostilite ve paranoid düşünce puanları kontrollerden yüksek bulundu. Hasta alt gruplarında; akneli hastaların depresyon, anksiyete, hostilite ve psikotizm puanları, ürtikerli hastaların depresyon, anksiyete ve somatizasyon puanları, allerjik egzemalı hastaların anksiyete ve hostilite puanları ile idiyopatik prürili hastaların anksiyete ve somatizasyon puanları kontrollere göre yüksek bulundu. Psikodermatolojik hastalığı olan hastaların stres düzeyi, depresyon, anksiyete ve psikotizm puanları kontrol grubu ve psikodermatolojik hastalığı olmayanlardan yüksekti. **Sonuç:** Dermatoloji hastalarının genel stres düzeyi ve bazı psikopatolojik semptomları kontrol grubuna göre yüksek bulunmakla beraber, farkın genel stres, depresyon, anksiyete ve psikotizm yönünden psikodermatolojik hastalığı olan gruptan kaynaklandığı saptanmıştır. Dolayısıyla hastaların psikolojik semptomlar açısından tanılarına göre değerlendirilmesi daha güvenilir sonuç verebilmektedir. Bazı dermatolojik hastalıklar, diğerlerine göre psikolojik semptomlarla daha az ilişkili görünmektedir. Psikodermatolojik hastalığı olanlara multidisipliner tedavi programları uygulanması tedavi başarısını arttırabilecektir.

Anahtar Kelimeler: Dermatoloji; psikolojik stres; psikofizyolojik hastalıklar

Turkiye Klinikleri J Dermatol 2009;19(3):129-37

The relation between psychological factors and skin diseases deserve a special attention. Psychodermatologic diseases recently gained more attention and are believed to be treated only by a multidisciplinary approach. Psychophysiologic disorders refer to skin disorders that are worsened by psychological stress; whereas primary psychiatric disorders are primarily psychologic and skin manifestations are self induced. Secondary psychiatric disorders include many disorders from psychodermatologic group and are considered as psychologic disorders that are associated with disfiguring skin disorders.[1,2,4-6] That is, dermatologic disorders, at least a subgroup of them, are accepted to deteriorate due to psychological factors and thus bring about even stronger psychological symptoms in return. Whether or not these patients had already a tendency to certain psychological or dermatological conditions right from the start due to their emotional responses is still debated.[7]

In the recent studies it has been suggested that a new fourth category of cutaneous sensory disorders is also included.[8,9] Cutaneous sensory disorders refers to cases in which the patient presents with only a disturbance in skin sensations like burning, stinging or itching without apparent primary skin lesions.

According to these classifications, some dermatologic disorders are accepted to be included in psychodermatologic disorders as acne, alopecia areata, atopic dermatitis, eczema, seborrheic dermatitis, rosacea, psoriasis, urticaria and vitiligo; whereas some dermatologic disorders of infectious origin or of physical factors as verruca vulgaris, impetigo, actinic keratoses or seborrheic keratoses are not.[2-6]

This study aims to evaluate the psychological distress levels and psychopathologic symptoms of a group of dermatologic patients, to compare their results with age and sex matched controls and to analyse these patients based on their diagnoses in order to determine whether or not a significant psychological correlation exists between certain subgroups.

We evaluated patients and controls by means of using brief symptom inventory (BSI) which is developed and based on as the short alternative to symptom checklist (SCL-90-R). Being a brief psychological self-report symptom scale, in BSI, the patients are asked to assess themselves according to the convenience of 53-item sentences on a scale from 1 to 4 points.

Enabling us to obtain information directly from the patient, BSI is designed to detect and assess psychological symptoms which can be used with clinical populations as well as the general public. BSI is used in an effort to detect the psychological symptoms both on general and specific terms under nine subgroups: Somatization, obsessive-compulsive thinking, interpersonal sensitivity, anxiety, depression, hostility, phobic anxiety, paranoid ideas and psychoticism.[10]

Tested by many studies in terms of its reliability, validity and utility, BSI instrument has also proved to be completely reliable for the Turkish population with a standardized form being available.[11]

BSI has two different dimensions. First calculations are made to determine three indices of distress, on the general assessment, global severity index (GSI) to assess average psychologic distress, positive symptom total (PST) total number of symptoms experienced by the individual, and positive symptom distress index (PSDI) to evaluate intensity of symptoms detected.[10-14] BSI also reflects nine primary symptom dimensions to detect psychological status in different medical conditions which are;

Somatization (SOM): Psychological distress arising from the perception of bodily dysfunction (e.g., dermatologic).

Obsessive-compulsive (O-C): Checking and double checking actions, difficulty making decision, and trouble concentrating.

Interpersonal sensitivity (I-S): Self-deprecation, uneasiness, and discomfort during interpersonal interactions.

Depression (DEP): Dysphoric affect and mood, withdrawal of interest in life activities, and loss of energy.

Anxiety (ANX): Restlessness, nervousness, and tension.

Hostility (HOS): Annoyance, irritability, urges to break things, and frequent arguments.

Phobic anxiety (PHOB): Symptoms consistent with phobic anxiety states or agoraphobia (e.g., phobic fears of travel, open spaces, crowds, and public places).

Paranoid ideation (PAR): Thoughts that are hostile, suspicious, and central.

Psychoticism (PSY): Symptoms of psychoticism like alien life style to extreme forms of psychotic states.

BSI can not only be used by psychologists and psychiatrists but also by all physicians, nurses, and other healthcare professionals, which renders it a practical and widely-used instrument.

MATERIAL AND METHODS

Patients admitting to dermatology outpatient unit are enrolled to the study provided that they have the specified the criteria: Being between 17 to 60 years of age, literacy to read and comprehend, willingness to complete the test, with no other systemic diseases or psychiatric diseases, non-user for any psychiatric medications including antidepressants and tranquilizers, not being pregnant nor lactating.

Age and sex matched controls were selected among voluntary medical personnel or patient's relatives with no present nor past dermatologic diseases and fulfilling the same criteria.

The number of the control patients is calculated according to patient sample size to achieve a 85% power in order to detect a difference of 0.15 between the null hypotheses that both group means are 0.70 and the alternative hypothesis includes the mean of group 2 is 0.85 with estimated group standard deviations of 0.5 and 0.5 and with a significance level (alpha) of using two sided Mann Whitney U test assuming that the actual distribution is normal.

All patients and controls were asked to complete the test in a silent room. Those tests, if partly completed, were excluded from the statistical analysis.

First, patient and control groups are compared in terms of their total points, GSI, PST, and PSDI. Then, nine sub dimensions are also separately evaluated and compared among groups. As the second step, we divided patients according to having a disorder mentioned in psychodermatologic disorders or not. Therefore patients with acne, alopecia areata, allergic eczema, seborrheic dermatitis, rosacea, psoriasis, urticaria, idiopathic pruritus and vitiligo are considered as "highly" psychosomatic, whereas patients with disorders of infectious origin or of physical factors are classified as "weakly" psychosomatic which are dermatophyte infections, verruca vulgaris, impetigo, furonculosis, ingrown nail, nevi, actinic keratoses or seborrheic keratoses. Then we compared these two groups in the light of Mann Whitney U test.

As the third step, we compared both patients with or without a psychodermatologic disorder and controls with Kruskal Wallis variance analysis in order to determine whether or not a statistically significant difference existed among these three groups and if so, to determine which group created the difference.

As the fourth step, we evaluated patients with distinct diagnoses, the patient number of which is sufficient to allow statistical evaluation to detect whether or not a certain disease or disease group has a relation with certain psychologic condition or symptom. Number of patients with acne, urticaria, idiopathic pruritus, allergic eczema and dermatophyte infection was sufficient to make statistical analysis. All these patient groups, except dermatophyte infection group, were within highly psychosomatic disorder group so we compared four highly psychosomatic patient groups within themselves and as the last step, with controls and weakly psychosomatic group as a whole. Then we re-evaluated the groups to find the group creating the statistical difference.

RESULTS

We disregarded the uncompleted forms. As a result we had 348 patients, 237 female and 111 ma-

le. We had 89 female and 59 male controls. Distribution of patients based on diagnoses is given on Table 1.

Average age was 36.27 ± 6.28 for the patients and 34.37 ± 6.97 for the controls. Groups were statistically similar according to age (p= 0.12, t test) and sex distribution (p= 0.087, chi square).

We evaluated results on 5 steps:

1. Patients versus controls;

Patient group had higher GSI scores comparing with the controls while PSDI were similar (Table 2).

Patients' points on somatization, obsession compulsion, interpersonal sensitivity, depression, anxiety, hostility and paranoid ideation were statistically higher than the controls (Table 2).

2. Comparing patients with and without a psychodermatologic disorder;

Comparison of "highly" and "weakly" psychosomatic groups, points of GSI, depression, anxiety and psychoticism were statistically higher in highly psychosomatic group (Table 2) while age was statistically higher in weakly psychosomatic group (p= 0.016, not on the table).

TABLE 1: Distribution of patients according to diagnoses.

Diagnosis	Number of patients (n)
Acne vulgaris	71
Allergic eczema	53
Pruritus (idiopathic)	42
Dermatophyte infection	32
Urticaria	23
Verruca vulgaris	18
Rosacea	12
Recurrent aphtous stomatitis	11
Ingrown nail	11
Alopecia (diffuse or localized)	9
Furunculosis	9
Psoriasis	6
Lichen planus	6
Melasma	5
Herpes zoster	5
Solar keratosis	4
Pitriasis rosea	3
Vitiligo	3
Others	25

3. Comparing patients with and without a psychodermatologic disorder and controls;

TABLE 2: Comparison of patient- control and patients with highly and weakly psychosomatic groups according to indexes of distress and symptom subdimensions.

	Patients (n= 348) mean ± SD	Controls (n= 148) mean ± SD	P Mann Whitney U	H P** mean ± SD (n= 234)	WP*** mean ± SD (n= 114)	P Mann Whitney U
GSI	0.87 ± 0.58	0.71 ± 0.54	< 0.001*	0.92 ± 0.59	0.79 ± 0.54	0.028*
PSDI	1.73 ± 0.62	1.70 ± 0.62	0.468	1.76 ± 0.62	1.67 ± 0.61	0.100
Somatization	0.88 ± 0.76	0.59 ± 0.59	< 0.001*	0.91 ± 0.76	0.82 ± 0.76	0.245
Obssesive-compulsive	1.18 ± 0.85	0.98 ± 0.83	0.03*	1.21 ± 0.88	1.13 ± 0.78	0.557
Interpersonal sensitivity	0.98 ± 0.82	0.80 ± 0.84	0.02*	1.03 ± 0.82	0.89 ± 0.83	0.46
Depression	0.78 ± 0.74	0.66 ± 0.69	0.001*	0.84 ± 0.73	0.64 ± 0.75	0.001*
Anxiety	0.84 ± 0.70	0.68 ± 0.71	0.001*	0.89 ± 0.71	0.75 ± 0.68	<0.001*
Hostility	0.97 ± 0.76	0.80 ± 0.84	0.01*	1.03 ± 0.79	0.87 ± 0.69	0.083
Phobic anxiety	0.51 ± 0.59	0.49 ± 0.540	0.891	0.54 ± 0.64	0.48 ± 0.43	0.476
Paranoidthinking	1.09 ± 0.78	0.90 ± 0.72	0.010*	1.12 ± 0.80	1.02 ± 0.74	0.365
Psychoticim	0.60 ± 0.62	0.52 ± 0.54	0.011*	0.66 ± 0.64	0.49 ± 0.57	0.011*

HP: Highly psychosomatic, WP: Weakly psychosomatic, GSI: Global severity index, PSDI: Positive symptom disterss index.

SD: Standard deviation

* Signifies statistically significant difference,

** Patients with psychodermatologic disorders are referred as 'highly psychosomatic',

*** Patients without psychodermatologic disorders are referred as "weekly" psychosomatic'.

Evaluating these two patient groups and controls, age was the first variable that is statistically different among the groups. Weakly psychosomatic group had a higher age than the rest (p= 0.021).

GSI points were statistically higher in highly psychosomatic group (p< 0.001) and were different than both weakly psychosomatic group and controls.

PST points were statistically higher in highly psychosomatic group than controls (p< 0.001) but there was no significant difference between controls and weakly psychosomatic group.

Somatization points were significantly lower in controls than both patient groups (p< 0.001) while obsessive-compulsive points were statistically higher in highly psychosomatic group (p= 0.005) than controls but not higher than weakly psychosomatic group. Highly psychosomatic group had also significantly higher points on interpersonal sensitivity (p= 0.001), hostility (p< 0.001) and paranoid ideation (p= 0.003) comparing with controls but not with weakly psychosomatic group. Depression (p= 0.001), anxiety (p< 0.001) and psychoticism (p= 0.011) points were statistically higher only in highly psychosomatic group whereas both weakly psycosomatic and control groups had similar points.

4. Comparison of patients with distinct psychodermatologic disorders;

Patients with acne, urticaria, idiopathic pruritus and allergic eczema were compared within themselves and all these patients belonged to highly psychosomatic group. There was no statistical difference in any points among these groups. Only age was lower in acne group (p< 0.001) comparing with the others.

5. Comparison of patients with distinct psychodermatologic disorders, patients without psychodermatologic disorders and controls;

Control group had statistically lower points on GSI (p= 0.01) and PST (p= 0.003) than other groups (Table 3).

Age was statistically lower in acne group (p< 0.001, data not on the table) than all other groups while patients with idiopathic pruritus had significantly higher age score (p< 0.001, data not on the table) comparing with controls.

Somatization points were similar between controls and patients with acne while both groups

TABLE 3: Comparison of patients with distinct psychodermatologic disorders, patients without psychodermatologic disorders and controls.

	Acne (n= 72) (mean ± SD)	Urticaria (n= 24) (mean ± SD)	Pruritus (n= 42) (mean ± SD)	Eczema (n= 43)	Control group (mean ± SD)	Weakly** Psychosomatic (mean ± SD)
GSI	0.90 ± 0.57	0.95 ± 0.57	0.90 ± 0.62	0.90 ± 0.5	0.70 ± 0.54*	0.78 ± 0.54
PST	25.91 ± 10.22	26.9 ± 11.09	25.67 ± 10.93	25.7 ± 0.6	20.76 ± 10.93*	23.65 ± 10.42
Somatization	0.75 ± 0.68	1.11 ± 0.85*	1.07 ± 0.84*	0.90 ± 0.7	0.59 ± 0.59	0.81 ± 0.76
Obssession compulsion	1.20 ± 0.85	1.15 ± 0.85	1.16 ± 0.85	1.2 ± 0.9	0,98 ± 0.83	1.12 ± 0.77
Interpersonal sensitivity	0.96 ± 0.77	1.0 ± 0.83	1.01 ± 0.87	0.94 ± 0.74	0.80 ± 0.83	0.89 ± 0.83
Depression	0.86 ± 0.68*	0.87 ± 0.67*	0.79 ± 0.75	0.76 ± 0.60	0.66 ± 0.69	0.64 ± 0.75
Anxiety	0.83 ± 0.71	0.90 ± 0.67	0.96 ± 0.76	0.85 ± 0.67	0.67 ± 0.7*	0.74 ± 0.67
Hostility	1.06 ± 0.79	1.06 ± 0.92	0.91 ± 0.80	1.011 ± 0.73	0.80 ± 0.83	0.86 ± 0.68
Phobic anxiety	0.52 ± 0.66	0.56 ± 0.43	0.58 ± 0.71	0.47 ± 0.54	0.48 ± 0.54	0.43 ± 0.47
Paranoid ideation	1.07 ± 0.66	1.13 ± 0.78	1.13 ± 0.89	1.12 ± 0.83	0.9 ± 0.71	1.02 ± 0.73
Psychoticism	0.72 ± 0.62*	0.61 ± 0.54	0.51 ± 0.61	0.60 ± 0.47	0.51 ± 0.53	0.49 ± 0.57

GSI: Global severity index, PST: Positive symptom total, SD: Standart deviation,

* Signifies the group(s) of patients representing statistical difference,

** Patients without psychodermatologic disorders are referred as "weekly" psychosomatic'.

had statistically lower points than urticaria (Control-Urticaria p= 0.002) (acne-urticaria p= 0.049) and idiopathic pruritus (control-pruritus p= 0.001) (acne-pruritus p= 0.049) (Table 4).

Depression points were lowest in "weakly psychosomatic" group but difference with controls was not statistically significant. Patients with acne had statistically higher depression points comparing with controls (p= 0.011) and weakly psychosomatic group (p= 0.004). Comparing with weakly psychosomatic group, patients with urticaria had also higher depression points (p= 0.046) (Table 4).

Anxiety points were similar between controls and weakly psychosomatic groups whereas controls had statistically lower points than patients with acne (p= 0.033), urticaria (p= 0.038), allergic eczema (p= 0.013) and idiopathic puritus (p= 0.003) (Table 4).

Control group had statistically lower hostility points when compared with acne (p= 0.003) and eczema (p= 0.009) (Table 4).

Acne patients had statistically higher points on psychoticism than controls (p= 0.013), idiopathic pruritus (p= 0.018) and weakly psychosomatic group (p= 0.004) (Table 4).

TABLE 4: List of significant statistical differences between certain patient subgroups and/or control group.

	Control group	**Urticaria**	**p**
Somatization	0.59 ± 0.59	1.07 ± 0.85	0.002
	Acne	**Urticaria**	**p**
Somatization	0.75 ± 0.68	1.07 ± 0.85	0.049
	Control group	**Pruritus**	**p**
Somatization	0.59 ± 0.55	1.11 ± 0.84	0.001
	Acne	**Pruritus**	**p**
Somatization	0.75 ± 0.68	1.11 ± 0.84	0.049
	Acne	**Control group**	**p**
Depression	0.86 ± 0.68	0.66 ± 0.69	0.011
	Acne	**Weakly**	**p**
Depression	0.86 ± 0.68	0.64 ± 0.75	0.004
	Urticaria	**Weakly group**	**p**
Depression	0.87 ± 0.67	0.64 ± 0.75	0.046
	Acne	**Control group**	**p**
Anxiety	0.83 ± 0.71	0.167 ± 0.71	0.033
	Urticaria	**Control group**	**p**
Anxiety	0.90 ± 0.67	0.167 ± 0.71	0.038
	Eczema	**Control group**	**p**
Anxiety	0.85 ± 0.67	0.167 ± 0.71	0.013
	Pruritus	**Control group**	**p**
Anxiety	0.97 ± 0.76	0.167 ± 0.71	0.003
	Acne	**Control group**	**p**
Hostility	1.06 ± 0.8	0.80 ± 0.84	0.003
	Eczema	**Control group**	**p**
Hostility	1.011 ± 0.73	0.80 ± 0.84	0.009
	Acne	**Control group**	**p**
Psychoticism	0.72 ± 0.62	0.51 ± 0.53	0.013
	Acne	**Weakly group**	**p**
Psychoticism	0.72 ± 0.62	0.48 ± 0.57	0.004
	Acne	**Pruritus**	**p**
Psychoticism	0.72 ± 0.62	0.51 ± 0.61	0.018

DISCUSSION

As an overall assessment, our results revealed statistically higher GSI in dermatological patients which indicates a higher level of "percieved" distress. Patients also had higher PST meaning their number of symptoms are more than those in controls.

On the assessment of sub dimensions, we had two subsets of results, first group showing a statistical difference between all patients, including "weakly and highly psychosomatic ones", and controls. The second subset of results showed a statistical difference between "highly" psychosomatic group and "weakly" psychosomatic group where "weakly" psychosomatic group was statistically similar to controls.

A. Results where "highly" and "weakly" psychosomatic patients were statistically different than controls;

Patients had significantly higher somatization points except for "acne patients" comparing with controls meaning that they might have distress arising from their "bodily dysfunction" or their dermatologic disorder.

Patients also had statistically higher interpersonal sensitivity points which may be in favor of "perceived" inferiority or inadequacy. They had significantly higher hostility scores which may suggest that they have an increased irritability and a tendency for frequent arguments. They also received statistically higher obsessive compulsive sco-

res, which signals at behaviour patterns such as double checking everything, difficulty in concentrating and decision making. As a last item, patients had significantly higher points on paranoid ideation than controls which may show thay have suspicious and central thoughts.

B. Results where "weakly" psychosomatic group was similar to controls and where they were both statistically different than "highly" psychosomatic group;

For increased distress level in patients, one can assume that being in a hospital environment may be a contributing factor, however, patients in "weakly psychosomatic" group had lower GSI scores similar to those of controls. Actually patients with "highly psychosomatic" disorders seem to be responsible from the increased distress level in patients' group.

PST is higher in "highly psychosomatic" group in comparison to "weakly psychosomatic" and control groups, which means that patients with "highly psychosomatic" disorders or psychodermatologic diseases, had higher number of symptoms. Therefore, distress level is lower and the number of symptoms are less and statistically similar to controls for patients in "weakly psychosomatic" group.

Points on depression, anxiety and psychoticism were statistically higher in patients with "highly psychosomatic" disorders or psychodermatologic diseases, whereas controls and patients with "weakly psychosomatic" disorders were similar.

PSDI levels were similar in controls and patients showing the intensity of symptoms were similar in all groups or that dermatological patients respond to distress as normal controls.

Acne and depression were found to be related in many previous studies, which our study also confirmed.[15,16] Another point worth attention was the results revealed by acne patients. First, patients with acne had low somatization scores which was similar to controls. This may show that in acne patients distress is not due to the perception of bodily dysfunction or "acne" unlike in patients with urticaria and pruritus whose dermatologic diseases may be the possible source of distress.

Depression, anxiety, hostility and psychoticism scores were statistically higher in patients with acne showing that acne patients represent a special sub group displaying multiple psychological symptoms.

Urticaria was shown to be related with depression, anxiety and general stress in previous studies as well as in our results.[17,18] We also detected high points of somatization, depression and anxiety in patients with urticaria. It was also suggested that a stressor event within 6 months before the onset of the cutaneous manifestations or a post traumatic stress were usually present in urticaria cases, we evaluated general psychopathologies rather than a specific event.[17,18]

Previous studies showed that acute and chronic stress and post traumatic stress syndrome might trigger or enhance pruritus.[18,19] Although burn related pruritus was found to be anxiety related, pruritus itself was found to be leading to agitation, difficulty in concentration and anxiety as well.[20,21] Our results confirmed high anxiety and somatization points in patients with idiopathic pruritus, however whether it is the reason or the result of pruritus stays unanswered.

Although relation between aggressive feelings and dermatitis has been defined long ago, association between hostility and eczema has not been recently investigated.[22] Our results showed high points of hostility and anxiety in patients with eczema. Previous studies defined eczema as a psychophysiologic disorder which is not directly connected to mind but that react to emotional states, such as stress.[23] On the other hand, hand eczema has been shown to be related with anxiety, depression and even sexual dysfunction.[24]

As a result, BSI evaluation of dermatological patients confirmed that patients had higher distress levels than controls. On the other hand, having categorized patients under "highly" and "weakly" psychosomatic, we had results confirming that there has been statistically significant and basic differences among these groups. Patients with "highly" psychosomatic disorders on the other hand represented

uniform results within themselves and no statistically significant difference was detected among patients with distinct diagnoses like acne, urticaria, eczema or idiopathic pruritus except for age.

When compared, highly psychosomatic group is statistically different from both weakly psychosomatic patients and controls in GSI, PST, depression, anxiety and psychoticism points. Therefore, weakly psychosomatic patients and controls in fact seem to be statistically similar in general distress levels. Dermatologic diseases have been found to be associated with certain psychopathologic findings.

This may lead to the assumption that not all dermatological patients have high distress levels but rather "certain" dermatological diseases seem to be related with increased distress. This may or may not be related with the chronicity of the disease.

On the other hand, highly and weakly psychosomatic groups were statistically similar to each other in terms of somatization, interpersonal sensitivity, hostility, obsessive compulsive and paranoid ideation points and both groups were statistically different than controls.

In previous studies, dermatology patients were shown to have high psychological stress and symptoms like somatization, anxiety and depression.[25,26] According to our results only acne patients had statistically lower somatization points, whereas anxiety and depression scores were statistically higher only in "highly" psychosomatic group.

CONCLUSION

All dermatologic patients, whether they have psychodermatologic diseases or not, had higher points of somatization, interpersonal sensitivity, hostility, obsessive compulsive and paranoid ideation. Patients having a psychodermatologic disease, additionally, had higher points on general distress, depression, anxiety and psychoticism. Acne patients had high points on depression, anxiety, hostility and psychoticism, patients with urticaria had high points of depression, anxiety and somatization, eczema patients had high points of anxiety and hostility and patients with idiopathic pruritus had high points of anxiety and somatization.

Evaluating distinct dermatologic patient subgroups gives better focus than evaluating all dermatology patients together. There seems to be some dermatologic conditions less likely to be related with psychologic symptoms and there seems to be certain psychopathologies related with certain dermatologic diseases. Multidisciplinary treatment regimens will increase the chance of successful treatment outcomes in patients with psychodermatologic diseases.

REFERENCES

1. Mercan S, Altunay İK. [Psychodermatology: a collaboration between psychiatry and dermatology]. Turk Psikiyatri Derg 2006;17(4): 305-13.
2. Buljan D, Buljan M, Situm M. Psychodermatology: a brief review for clinicians. Psychiatr Danub 2005;17(1-2):76-83.
3. Koo J, Lebwohl A.Psycho dermatology: the mind and skin connection. Am Fam Physician. 2001;64(11):1873-8.
4. Kieć-Swierczyńska M, Dudek B, Krecisz B, Swierczyńska-Machura D, Dudek W, Garnczarek A, et al. [The role of psychological factors and psychiatric disorders in skin diseases.] Med Pr. 2006;57(6):551-5.
5. Özmen M. [Psychodermatology.] Turkiye Klinikleri J Psychiatry-Special Topics 2008, 1(2):85-90
6. Özpoyraz N, Tamam L. [Treatment Approaches to Psychocutaneous Diseases]. Turkiye Klinikleri J Dermatol 2001;11(1):46-55.
7. Bilkis MR, Mark KA. Mind-body medicine. Practical applications in dermatology. Arch Dermatol 1998;134(11):1437-41.
8. Jafferany M. Psychodermatology: a guide to understanding common psychocutaneous disorders. Prim Care Companion J Clin Psychiatry 2007;9(3):203-13.
9. Koo J, Gambla C. Cutaneous sensory disorder. Dermatol Clin 1996;14(3):497-502.
10. Morlan KK, Tan SY. Comparison of the Brief Psychiatric Rating Scale and the Brief Symptom Inventory. J Clin Psychol 1998;54(7): 885-94.
11. Şahin NH, Durak A. [Brief symptom Inventory: Adaptation for Turkish youth]. Turk J Psychol 1994; 9(31):44-56.
12. Petzke F, Gracely RH, Park KM, Ambrose K, Clauw DJ.What do tender points measure? Influence of distress on 4 measures of tenderness. J Rheumatol 2003;30(3):567-74.
13. Otchet F, Carey MS, Adam L.General health and psychological symptom status in pregnancy and the puerperium: what is normal? Obstet Gynecol 1999;94(6):935-41.
14. Endermann M. The Brief Symptom Inventory (BSI) as a screening tool for psychological disorders in patients with epilepsy and mild intellectual disabilities in residential care. Epilepsy Behav 2005;7(1):85-94.
15. Yazici K, Baz K, Yazici AE, Köktürk A, Tot S, Demirseren D, Buturak V. Disease-specific quality of life is associated with anxiety and depression in patients with acne. J Eur Acad Dermatol Venereol 2004;18(4): 435-9.

16. Gupta MA, Gupta AK. Depression and suicidal ideation in dermatology patients with acne, alopecia areata, atopic dermatitis and psoriasis. Br J Dermatol 1998;139(5):846-50.
17. Berrino AM, Voltolini S, Fiaschi D, Pellegrini S, Bignardi D, Minale P, et al. Chronic urticaria: importance of a medical-psychological approach. Eur Ann Allergy Clin Immunol 2006;38(5):149-52.
18. Gupta MA. Somatization disorders in dermatology. Int Rev Psychiatry 2006;18(1): 41-7.
19. Arck P, Paus R. From the brain-skin connection: the neuroendocrine-immune misalliance of stress and itch. Neuroimmunomodulation 2006;13(5-6):347-56.
20. Willebrand M, Low A, Dyster-Aas J, Kildal M, Andersson G, Ekselius L, et al. Pruritus, personality traits and coping in long-term follow-up of burn-injured patients. Acta Derm Venereol. 2004;84(5):375-80.
21. T-J Goon A, Yosipovitch G, Chan YH, Goh CL Clinical characteristics of generalized idiopathic pruritus in patients from a tertiary referral center in Singapore. Int J Dermatol 2007; 46(10):1023-6.
22. Wise TN, Reading AJ. A woman with dermatitis and dissociative periods. Int J Psychiatry Med 1975;6(4):551-9.
23. Koo J, Lebwohl A. Psycho dermatology: the mind and skin connection. Am Fam Physician 2001;64(11):1873-8.
24. Ergün M, Türel Ermertcan A, Oztürkcan S, Temeltaş G, Deveci A, Dinç G. Sexual dysfunction in patients with chronic hand eczema in the Turkish population. J Sex Med 2007; 4(6):1684-90.
25. Picardi A, Porcelli P, Pasquini P, Fassone G, Mazzotti E, Lega I, et al. Integration of multiple criteria for psychosomatic assessment of dermatological patients. Psychosomatics 2006;47(2):122-8.
26. Zachariae R, Zachariae C, Ibsen HH, Mortensen JT, Wulf HC. Psychological symptoms and quality of life of dermatology outpatients and hospitalized dermatology patients. Acta Derm Venereol 2004; 84(3):205-12.