



Psychiatry

STUDY OF PSYCHIATRIC MORBIDITIES AMONG PATIENTS ATTENDING DERMATOLOGY OPD IN A TERTIARY CARE HOSPITAL OF TRIPURA

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ABSTRACT **Background:** Psychiatric disturbance and psycho-social impairment is reported in at least thirty percent of the dermatological patients and among all psychiatric disorders, anxiety and depression are more commonly observed and their recognition is important in the management of the disease. Stress may aggravate the cutaneous disease in 40-100% of patients. So, there is a great need to investigate Psychiatric morbidities among patients attending Dermatology OPD. This study tries to find out the pattern of different psychiatric disorders among patients attending Dermatology outpatient department of a tertiary care Hospital of state of Tripura in North East India. **Methods:** Psychiatric diagnosis was done by ICD-10 Diagnosis Criteria. Sociodemographic information was gathered as per prepared standard questionnaire. ICD 10 Diagnostic criteria were used for diagnosis of psychiatric illness and MINI plus were used to assess the psychiatric morbidity among the 186 study subjects. **Result:** In this study 82.3% of patients had psychiatric disorder among patients attending dermatology OPD which included depression 25.85%, adjustment disorder 9.75%, anxiety disorder 18.8%, panic disorder 3.2%, somatoform disorder 9.7%, OCD- 10.2%, schizophrenia 2.7%, Bipolar affective disorder 2.7%. In this study it has been found that depression (65.6%) was common among patients of Vitiligo, followed by Anxiety disorder (16%), Adjustment disorder (3.2%), panic disorder (3.2%), somatoform disorder (3.2%) and schizophrenia (3.2%). **Conclusion:** No studies have been conducted to reflect the scenario and pattern of psychiatric morbidities among patients attending Dermatology outpatient department of a tertiary care Hospital of state of Tripura. Our study shows the need of further researches on this topic for a better understanding of the mental health issues among the patients who are suffering from different dermatological disorders which thereafter can help the patients to take appropriate steps to prevent mental health problems and promote better mental and emotional health. Any kind of stress, anxiety, or other psychological issues generally precipitate or exaggerate dermatological disorders like psoriasis, atopic dermatitis, acne, and hyperhidrosis.

KEYWORDS : Psychiatric morbidity, Dermatological disorders, Stress, Mental Health.

INTRODUCTION:

Skin is the largest organ that has primary function in tactile receptivity and reacts directly upon emotional stimuli^[1,2,3]. The relationship between skin and brain exists due to the fact that both have same ectodermal origin and are affected by same hormones and neurotransmitters^[1,2]. Psycho dermatology describes an interaction between psychiatry, dermatology and psychology. A healthy normal skin is essential for a person's physical and mental well-being and sense of self confidence^[1,2,3,4]. Approximately 30–40% cases there is underlying psychiatric /psychological problem that either causes or exacerbates a skin complaint.

The relationship between dermatological diseases and psychiatric morbidity can be established as follows: 1) The appearance of skin lesions and the chronic progression of the disease may frequently affect the quality of social and work life of patients, thus, psychiatric morbidity may arise as a complication, 2) less frequently, these skin diseases may result from primary psychological diseases such as obsessive compulsive and delusional disorders, 3) both the skin findings and psychiatric complaints may develop secondary to a disease such as systemic lupus erythematosus, 4) some drugs, such as corticosteroids, used in dermatological treatment may trigger psychiatric symptoms, or lithium and some antipsychotic drugs may cause dermatological diseases^[5,6,7,8,9].

Psychiatric co morbidity is often one of the most important indices of the overall disability associated with the skin condition. The prevalence rate of Psychiatric disorders are very high (30%) among patients with acne, pruritus, urticaria, alopecia and herpes virus infections. Out of these, more than one third of patients need consideration of associated psychological factors for effective management of the skin conditions^[10,11,12,13]. Patients with

dermatological diseases are more likely to report anxiety, depressive symptoms and suicidal ideation than those without chronic dermatological conditions. For example, one study documented that the prevalence of active suicidal ideation among psoriasis (7.2%) and acne (6%) patients was higher than patients with general medical conditions (2.4% - 3.3%)^[14,15,16]. Additionally, Isotretinoin which is used for treatment of acne is thought to be associated with increased risk for depression and suicidal attempts^[17,18,19].

Psychiatric disorders are any pattern of psychological or behavioural symptoms that cause an individual significant distress impairing their ability to function in life and/or significantly increase their risk of death, pain, disability or loss of freedom. Psychiatric disorders are also known as psychiatric condition or mental illness^[20,21,22,23].

The influence of psychological factors on skin diseases is fairly common, although it is not much studied and debated. Dermatology holds a distinct position in psychosomatic medicine because it deals with an organ that can be readily seen and touched^[24,25,26,27].

It has been estimated that the effective management of at least one third of the patients in dermatological departments depends, to some extent, upon the recognition of the emotional factor. However, there is very little published data on the incidence of dermatoses in patients with a primary psychiatric condition^[28,29,30].

Patients with psycho-cutaneous disorders frequently resist psychiatric referral and the liaison among primary care physicians, psychiatrists and dermatologists can prove very useful in the management of these conditions^[31,32,33,34].

Dermatologists also have stressed on need of psychiatric consultation and counselling for their patients in general and also acknowledged

that psychological factors are of main concern in chronic intractable dermatological conditions^[35,36,37,38]. Some dermatology patients are likely to benefit from psychotherapeutic interventions and psychotropic agents for the management of the psychosocial co morbidity, in addition to the standard dermatologic therapies for their skin disorder.

Combined evaluations of psychiatric and dermatological conditions provide more efficient treatment to patients with skin disorders. There is paucity of Indian studies with large sample of patients with skin diseases having psychiatric co morbidity^[3].

Hence, the present study is undertaken to find out prevalence of psychiatric disorders among the patients attending Department of Dermatology so as to ascertain the severity of the problem in this tiny State which may help to formulate the strategies to serve the people better.

MATERIALS AND METHODS:

The aim of this study was to assess psychiatric disorders associated with dermatological conditions among patients attending Dermatology OPD of Agartala Govt. Medical College & GB Pant Hospital, Agartala. The study sample consisted of a total of 186 patients. The study was conducted in the department of Psychiatry and OPD of Dermatology department of AGMC & GBP Hospital. The study subjects were recruited from patients attending Dermatology OPD. 3(three) patients were randomly selected every week, so every month 15(fifteen) patients were enrolled in this process till planned sample size was achieved. All selected cases were assessed for psychiatric morbidities. Ethical approval was taken from the Institutional Ethical Committee prior to study.

Informed written consent was obtained from all the patients who were included in this study. The respondents were assured of confidentiality. The participants were clearly explained the purpose of the study and subjects were selected on voluntary basis. The socio-demographic data was obtained using a pretested proforma for socio demographic data. The study sample was selected as per following criteria;

INCLUSION CRITERIA: Subjects aged between 18 and 60 years old attending Dermatology OPD (Out patient Department) of AGMC & GBP Hospital.

EXCLUSION CRITERIA: Patients who denied participation in the study.

Patient with previous history of psychiatric disorder before the onset of dermatological disease.

Patients having any systemic and chronic debilitating physical illness.

Patients with mental retardation.

Duration of the Study was one and half year w.e.f. January 2018 to June 2019

All the patients were screened and diagnosed for different psychiatric disorders using ICD 10 Diagnostic criteria for diagnosis of psychiatric illness and MINI plus (mini-international neuropsychiatric interview) scale. Categorical data was analysed by proportions, percentage. Chi-square test were used for testing the associations, P value <0.05 considered statistically significant. Measurable characteristics of data analysed by Z test and student t-test and proper diagrams used for presentation of results.

RESULT:

Table No 1

Socio- Demographic Details		
Variable (Age in years)	No of Cases	Percentage (%)
18-30	69	37.1
31-40	51	27.4
41-50	52	28.0
51-60	14	7.5
Total	186	100
Gender		
Male	79	42.5
Female	107	57.5

Marital Status		
Unmarried	72	38.7
Married	114	61.3
Locality		
Rural	111	59.7
Urban	75	40.3
Educational status		
Illiterate	5	2.7
Primary	61	32.8
Higher Secondary	48	25.8
Graduate & above	72	38.7
Religion		
Hindu	166	89.2
Muslim	14	7.5
Christian	6	3.2
Occupation		
Housewife	30	16.1
Farmer	44	23.7
Student	37	19.9
Govt. Employee	14	7.5
Business	42	22.6
Daily laborer	7	3.8
Unemployed	12	6.5
Community		
Bengali	114	61.3
Tribal	72	38.7
Socioeconomic Status		
Higher	46	24.7
Higher Middle	56	30.1
Middle	49	26.3
Lower Middle	25	13.4
Lower	10	5.4

In the present study, 69% belonged to 18-30 years of age. 51% were within 31-40 years of age, 52% were from 41-50 years and 14% were within 51-60 years age groups. 57.5% were female and 42.5% were male. This study shows that psychiatric morbidities were more common in female than males. 38.7% of study population was constituted by unmarried patients, 114% were married. Among females 69 were married and 38 were unmarried. Among males 45 were married and 34 were unmarried. In this study it has been found that 59.7% patients attending dermatology OPD were from rural areas whereas 40.3% were from urban areas. 32.8% patient attending dermatology OPD had studied up to primary educational level, 25.8% had studied up to higher secondary and 38.7% were graduate & above. Only 2.7% were illiterates. Majority of study sample were Hindu 89.2% by religion followed by Muslim 7.5% & Christian 3.2%. The above table shows most of the sample by occupation was farmer 23.7%, followed by 22.6% businessman, 19.9% student, 16.1% housewife, 7.5% Govt. Employee, 6.5% was unemployed & 3.8% daily laborer. In this study majority of people belong from Bengali community (61.3%) followed by tribal community 38.7%. Majority of Study sample according to modified Prasad's scale 30.1% were higher middle socioeconomic status followed by 26.3% middle class, 24.7% higher socioeconomic status, 13.4% were lower middle and 5.4% were from lower socioeconomic status

Table no. 2: Distribution of data according to psychiatric morbidities among patients attending Dermatology OPD (n=186)

Psychiatric Co morbidities	No of cases	Percentage (%)
Depression	48	25.8
Adjustment Disorder	18	9.7
Anxiety disorders	35	18.8
Panic disorders	06	3.2
Somatoform disorders	18	9.7
Obsessive Compulsive Disorder	19	10.2
Schizophrenia	05	2.7
Bipolar Affective Disorder	05	2.7
No Disease	32	17.2

In this study 82.3% of patients had psychiatric disorder among patients attending dermatology OPD which included depression 25.85%, adjustment disorder 9.75%, anxiety disorder 18.8%, panic disorder 3.2%, somatoform disorder 9.7%, OCD- 10.2%, schizophrenia 2.7%, Bipolar affective disorder 2.7%, no disease 17.2%.

Table no.3: Skin disorder and psychiatric morbidities (n=186)

Psychiatric Morbidities	Vitiligo	Psoriasis	Acanthosis	Alopecia areata	Chronic urticaria	Pemphigus	Contact dermatitis	Atopic dermatitis	Drug eruption	Seborrhea
Depression	21	13	08	05	00	00	00	01	00	00
Adjustment Disorder	01	09	01	04	00	02	01	00	00	00
Anxiety disorders	05	14	04	04	02	01	02	01	01	01
Panic disorders	01	01	00	00	00	02	00	00	02	00
Somatoform disorders	01	07	01	00	02	00	01	02	02	02
OCD	00	06	01	00	02	01	09	00	00	00
Schizophrenia	01	03	00	01	00	00	00	00	00	00
BPAD	00	01	01	01	00	00	02	00	00	00
No Disease	01	05	04	00	00	02	04	03	10	10

In this study depression (65.6%) was common among patients of Vitiligo, followed by Anxiety disorder (16%), Adjustment disorder (3.2%), panic disorder (3.2%), somatoform disorder (3.2%) and schizophrenia (3.2%). p value=0.000 found to be significant.

Table no.4: Association of area involvement among dermatology patients having Psychiatric morbidity

Involved area	Psychiatric morbidity	No Psychiatric Morbidity	P value
Face	92.4%	7.6%	0.003
Trunk	86.2%	13.8%	
Scalp	67.3%	32.7%	
Upper limb	70.0%	30%	

Psychiatric morbidity were more among the patients with face area involved (92.4%), followed by trunk (86.2%), upper limb (70.0%) and scalp (67.3%). Association between face Involvement and psychiatric morbidity was found statistically significant (p=0.003).

Among 153 patients with psychiatric disorder, 143 (93.5%) had more than 6 months duration of skin diseases against 10 (6.5%). which shows that there is statistically significant (p=0.000) relationship between duration of skin diseases and psychiatric morbidity.

Table no. 5: Association between occupation and psychiatric morbidity

Variables (Occupation)	Psychiatric Morbidity		Significance P value
	Yes	No	
House wife	28 (93.3%)	02(6.6%)	.688
Farmer	34 (77.27%)	10 (22.7%)	
Student	31 (83.7%)	06 (16.21%)	
Govt. Employee	11 (78.57%)	03(21.4%)	
Businessman	33 (78.5%)	09(21.4%)	
Daily laborer	06 (85.7%)	01 (14.2%)	
Unemployed	10(83.3%)	02 (16.6%)	

It was found that housewife was more prone to be suffering from psychiatric morbidities but there was no significant association between occupation and psychiatric morbidity.

Table no. 6: Association between Gender and psychiatric morbidity

Gender	Psychiatric Morbidity		P value
	Yes	No	
Male	66	13	0.693
Female	87	20	

Although from the above table it was found that females were prone to be suffering from psychiatric morbidities but there was no significant association between gender and psychiatric morbidity.

Table no.7: Association between psychiatric morbidity and age

Age (years)	Psychiatric Morbidity		P Value
	Yes	No	
18-30	60	09	0.195
31-40	43	08	
41-50	41	11	
51-60	09	05	

In this study chi-square test is applied to identify the association between the age groups and Psychiatric morbidities among 186 dermatology patients, which shows that there was no significant statistical association between age and psychiatric morbidities.

Table no.8: Association between Psychiatric morbidity and Religion

Religion	Psychiatric Morbidity		P value
	Yes	No	
Hindu	136	30	0.352
Muslim	13	01	
Christian	04	02	

In this study chi-square test is applied to identify the association between the religion and Psychiatric morbidities among 186 dermatology patients, which shows that there was no significant association between religion and psychiatric morbidities.

Table no. 9: Association between psychiatric morbidity and community

Community	Psychiatric Morbidity		P value
	Yes	No	
Bengali	96	18	0.380
Tribal	57	15	

In this study chi-square test was applied to identify the association between the community and psychiatric morbidities among 186 dermatology patients, which shows that there was no Significant statistical difference between community and psychiatric morbidities.

Table no.10: Association between psychiatric morbidity and marital status

Marital Status	Psychiatric Morbidity		P value
	Yes	No	
Married	97	17	0.204
Un married	56	16	

In this study chi-square test was applied to identify association between the marital status and psychiatric morbidities among 186 dermatology patients, which shows that there was no significant association between marital status and psychiatric morbidities.(p value= 0.204).

Table no.11: Association between psychiatric morbidity and educational Status

Educational Status	Psychiatric Morbidity		P Value
	Yes	No	
Primary	48	13	0.692
Secondary	42	16	
Graduates	59	13	
Illiterate	04	01	

In this study chi-square test was applied to identify the association between the education and psychiatric morbidities among 186 dermatology patients, which shows that there was no statistical significance between patients educational status and psychiatric morbidities.

Table no.12: Association between psychiatric morbidity and locality

Locality	Psychiatric Morbidity		P value
	Yes	No	
Rural	93	18	0.508
Urban	60	15	

In this study chi-square test was applied to identify association between the locality and psychiatric morbidities among 186 dermatology patients, which shows that there was no significant association between locality, and psychiatric morbidities.

Table no.13: Association between psychiatric morbidity and socioeconomic status

Socioeconomic Status	Psychiatric Morbidity		Significance P value
	Yes	No	
Higher	37	09	.648
Higher middle	49	07	
Middle	39	10	
Lower Middle	19	06	
Lower	09	01	

In this study chi-square test is applied to identify the association between the socioeconomic status as per B. G. Prasad classification and psychiatric morbidities among 186 dermatology patients, which shows that there was no significant association between socioeconomic status and psychiatric morbidities.

DISCUSSION

Results confirm the findings of previous studies that there are high rates of Psychiatric morbidity in dermatological patients and various reasons could account for this. Psychiatric disorders may arise as a complication or a consequence of a primary skin disease, in reaction to disfigurement perceived social stigma or undesirable changes in life-style resulting from skin disease. The dermatologist may know that some of the dermatological disorders are psychiatric in nature but present with dermatological manifestations. Skin lesions and psychiatric symptoms may both be present in some systemic diseases, such as Systemic lupus Erythematosus or Porphyria. Some drugs used in dermatology, such as corticosteroids, may precipitate psychiatric symptoms and conversely, certain drugs used in psychiatry such as lithium, mood stabilizers like carbamazepine, lamotrigine or some anti-psychotics may affect the skin. Skin diseases which were associated with psychiatric disorders were included in my study were acne, pruritus, urticaria, Vitiligo and alopecia areata.

The higher rate of depression in patients with Vitiligo was expected because of the widely recognized psychological impact of the disease. Many studies have reported depression with symptoms of marked impairment in emotional wellbeing, death wishes and suicidal tendencies in patients with Vitiligo.

PSYCHIATRIC MORBIDITY AMONG PATIENT ATTENDING DERMATOLOGY OPD:

In this study, data analysis revealed that among 186 patients, 82.2% patient attending dermatology OPD had psychiatric morbidities which were depression 25.85%, adjustment disorder 9.75%, anxiety disorder 18.8%, somatoform disorder 9.7%, OCD 10.2%, schizophrenia 2.7%, bipolar affective disorder 2.7%, no disease 17.2%. Similar or lower rates had been shown in western studies and Indian studies. Among them Felix Y et.al. found 70% psychiatric morbidity, Aktan S et.al. 33.3%, Picardi A et.al. 25%, Fried RG et.al. 30%, Muameret. al. 15.3%, Masoud G et.al. 67.1% and Mafaddel et.al. 52.3%.

Possible reason for this variation could be due to differing geographic, culture and economic background and also because of the fact that these studies were conducted across different timeline using different diagnostic/ classificatory systems.

SOCIO-DEMOGRAPHIC CHARACTERISTICS OF THE STUDY POPULATION:

Interested finding in this study that females were more affected than males. Different studies have shown similar observation like studies done by Bagadia VN et.al. 1986, Picardia A et.al 2000, Ahmed I et.al 2007, Aslam R et.al 2007, Chara K. et.al 2013, Haritha S et.al 2018. This study showed that female was more affected as compare to male.

The reason might be females were more affected than males because the burden of psychiatric morbidities among dermatological patients, particularly, in our state, is because of unique socio-cultural problems and stigma related to it. It may also present as an obstacle for marriages, causes social embarrassment and social isolation. Negative attitude of others towards them may prevent them from participating many social activities.

In my study, the association of dermatology patients with manifested psychiatric disorders was found to be statistically significant (p value=0.000).

In this study, the age wise distribution has shown 39.21% of patients

with psychiatric morbidities were among 18 to 30 years of age group which is followed by 28.1% among 31 to 40 years of age, 26.1% among 41 to 50 years of age and only 5.8% among 51 to 60 years of age.

It has been found in this study that psychiatric morbidity is higher among 18 to 30 years of age group. This age is peak period for schooling, employment, marriage, responsibilities in other social aspects. For younger patients dermatological disorder may play an important obstacle in achieving their goals and aspirations. They become more hopeless and frustrated about their condition and their prospects for future. So, dermatological disorder becomes factor for major obstacle in younger age (18 to 30) which lead to psychiatric morbidities.

This study had shown that rural and urban distribution was 60.8% and 39.2% respectively among dermatological patients having psychiatric morbidity.

Tripura is a small state and patients with dermatological disorder receive same level of treatment and care in the clinics. Rural population has little higher rate of psychiatric morbidity than urban population. It may be concluded that individuals residing at urban areas has higher levels of education with greater cognitive resonance, which in turn facilitate better coping strategies and adjustment to life with dermatological disorders compare to rural population.

Married individuals has shown slight higher psychiatric morbidity (63.4%) as compare to unmarried (36.6%) individuals among patients with dermatological disorders.

It may be concluded that, the marital responsibilities are more stressful as compare to responsibilities of the unmarried. Married people have added family responsibilities in addition to other social and occupational responsibilities which can act as a huge stressor for psychiatric morbidities.

Psychiatric morbidity among Socio demographic status had shown following distribution, higher class (24%), High middle class (32%), Middle class (25%), Lower middle class (12.4%), and Lower class (5.8%).

People of Higher socio-economic profile had slightly more psychiatric morbidity as compare to lower socio-economic profile. This may be due to the fact that people from higher socio-economic profile are exposed to more social and work related stressor as compare to lower socio-economic groups.

Psychiatric morbidity was more among the patients with face area involved (92.4%), followed by trunk (86.2%), upper limb (70.0%) and scalp (67.3%). The result is statistically significant (p=.003).

Dermatological disease involving the face area affects the self-confidence and self-respect. In fact, they may lead to effect on self-image and creating a problem of identity. Dermatologists have observed their patients to be relatively more concerned and worried about the diseases that are related to their physical appearance. As a result of which patients with skin disorder may be affected with disorders such as anxiety, depression and other psychosocial problems.

Interesting finding in this study that prevalence of psychiatric morbidity among patient attending dermatology OPD was 82.2%. So, by early diagnosis and proper treatment can improve their quality of life and they will be able to engage to their day to day activities properly

LIMITATIONS OF THE STUDY:

- 1) The present study was a hospital based cross-sectional study and so it may not reflect the actual scenario of the socio demographic variables of the community.
- 2) There was no control group in the study.
- 3) Sample size of the study was small.
- 4) Age group less than 18 years were not included in study.

CONCLUSION:-

Anxiety and depression are more common among female patients having dermatological disease with exposed areas mainly involving

face. Early recognition and treatment of depression and anxiety associated with skin disorders can lead to improved therapeutic outcome and may avert disastrous outcomes, including suicide. As dermatologists act as primary care physician for patients with a wide range of skin diseases, they are in a unique position to recognize psychiatric morbidity and to take appropriate measure. In this state of Tripura, my study has been the first of this kind. I feel, more such studies need to be done with a view detecting cases of psychiatric morbidity at their early stages, so that treatment can be initiated early and benefit to the patient can be maximized.

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REFERENCES:

1. Abhinav Kumar, Kunal Kumar, Praneta Swarup. Depression in patients attending dermatological OPD in a teaching hospital, *Journal of Family Medicine and Primary Care*. 2016; 5(2):449-452
2. Sack. *Psychodermatology: The Psychological impact of skin disease*. In: Walker C, Papadoulos L, Editors. Chapter-Introduction: 00-01. New York: Cambridge University Press; 2005.
3. Wilson A. *Psychodermatology-The Psychological impact of skin disease*. In: Walker C, Papadoulos L, Editors. Chapter-Introduction: 00-01. New York: Cambridge University Press; 2005.
4. Engles WD; Dermatologic disorders. *Psychosomatics* 1982;23:1209-19
5. Al'Abadie MS, Kent GG, Gawkrödger DJ. The relationship between stress and the onset and exacerbation of psoriasis and other skin conditions. *Br J Dermatol* 1994; 130:199-203.
6. Felixy, Attah Johnson M.B, Ch.B. ; Correlation of morbidity between dermatologic diseases and psychiatric disorders in Papua New Guinea. *International Journal of Dermatology*. 1995; 34(4):244-248.
7. Medansky RS, Handler RM. Dermatopsychosomatics: classification, physiology, and therapeutic approaches. *J Am Acad Dermatol* 1981; 5: 125-36
8. Koblenzer CS. Psychosomatic concepts in dermatology. *Arch Dermatol* 1983;119: 501-12
9. Panconesi P. Psychosomatic dermatology. *Clin Dermatol* 1984; 2: 94-179.
10. Seville RH. Psoriasis and stress. *Br J Dermatol* 1977; 97: 297-302.
11. Polenghi MM, Molinari E, Gala C, et al. Experience with psoriasis in a psychosomatic dermatology clinic. *Acta Derm Venereol (Stockh)* 1994; 186: 65-6
12. Polenghi MM, Molinari E, Gala C, et al. Experience with psoriasis in a psychosomatic dermatology clinic. *Acta Derm Venereol (Stockh)* 1994; 186: 65-6
13. Mazzetti M, Mozzetta A, Soavi GC, et al. Psoriasis, stress and psychiatry: psychodynamic characteristics of stressors. *Acta Derm Venereol (Stockh)* 1994; 186: 62-4.
14. Ginsburg IH, Link BG. Feelings of stigmatization in patients with psoriasis. *J Am Acad Dermatol* 1989; 20: 53-63
15. Fortune DG, Richards HL, Griffiths CE, et al. Psychological stress, distress and disability in patients with psoriasis: consensus and variation in the contribution of illness perceptions, coping and alexithymia. *Br J Clin Psychol* 2002; 41 (Pt 2): 157-74.
16. Niemeier V, Nippesen M, Kupfer J, et al. Psychological factors associated with hand dermatoses: which subgroup needs additional psychological care? *Br J Dermatol* 2002; 146: 1031-7
17. Feldman SR, Fleischer Jr AB, Reboussin DM, et al. The economic impact of psoriasis increases with psoriasis severity. *J Am Acad Dermatol* 1997; 37(4): 564-9
18. Kirkby B, Richards HL, Woo P, et al. Physical and psychological measures are necessary to assess overall psoriasis severity. *J Am Acad Dermatol* 2001; 45 (1): 72-6
19. Fortune DG, Main CJ, O'Sullivan TM, et al. Quality of life in patients with psoriasis: the contribution of clinical variables and psoriasis-specific stress. *Br J Dermatol* 1997; 137: 755-60.
20. Arnetz BB, Fjellner B, Eneroth P, et al. Stress and psoriasis: psychoendocrine and metabolic reactions in psoriatic patients during standardized stressor exposure. *Psychosom Med* 1985; 47: 528-41
21. Rubino IA, Sonnino A, Pezzarossa B, et al. Personality disorders and psychiatric symptoms in psoriasis. *Psychol Rep* 1995; 72: 547-53
22. Vidoni D, Campiutti E, D'Aronco R, et al. Psoriasis and alexithymia. *Acta Derm Venereol (Stockh)* 1989; 146: 91-2
23. Goldsmith LA, Fisher M, Wacks J. Psychological characteristics of psoriatics. *Arch Dermatol* 1969; 100: 674-6
24. Morse RM, Perry HO, Hurt RD. Alcoholism and psoriasis. *Alcohol Clin Exp Res* 1985; 9: 396-9
25. Mills CM, Srivastava RD, Harvey IM, et al. Smoking habits in psoriasis: a case control study. *Br J Dermatol* 1992; 127: 18-21
26. Layton M. Optimal management of acne to prevent scarring and psychological sequelae. *Am J Clin Dermatol* 2001; 2: 135-41
27. Wu SF, Kinder BN, Trunnell TN, et al. Role of anxiety and anger in acne patients: a relationship with severity of the disorder. *J Am Acad Dermatol* 1988; 18 (2 Pt 1): 325-33
28. Mallon E, Newton JN, Klassen A, et al. The quality of life in acne: a comparison with general medical conditions using generic questionnaires. *Br J Dermatol* 1999; 140 (4): 672-6
29. Smithard A, Glazebrook C, Williams HC. Acne prevalence, knowledge about acne and psychological morbidity in mid adolescence: a community based study. *Br J Dermatol* 2001; 145 (2): 274-9
30. Cotterill JA, Cunliffe WJ. Suicide in dermatological patients. *Br J Dermatol* 1997; 137 (2): 246-50
31. Roy A. Suicide. In: Sadock BI, Sadock VA, editors. *Kaplan & Sadock's comprehensive textbook of psychiatry*. 7th ed on CDROM. Folio Infobase. Philadelphia (PA): Lippincott Williams & Wilkins; 2000
32. Rubinow DR, Peck GL, Squillace KM, et al. Reduced anxiety and depression in cystic acne patients after successful treatment with oral isotretinoin. *J Am Acad Dermatol* 1987; 17 (1): 25-32
33. Gupta MA, Johnson AM, Gupta AK. The development of an Acne Quality of Life scale: reliability, validity, and relation to subjective acne severity in mild to moderate acne vulgaris. *Acta Derm Venereol* 1998; 78 (6): 451-6
34. Layton AM, Seukeran D, Cunliffe WJ. Scared for life? *Dermatology* 1997; 195 Suppl. 1: 15-21
35. Kellett SC, Gawkrödger DJ. The psychological and emotional impact of acne and the effect of treatment with isotretinoin. *Br J Dermatol* 1999; 140 (2): 273-82
36. Physicians' Desk Reference. 56th ed. Montvale (NJ): Medical Economics Data Production Company; 2002
37. Sneddon J, Sneddon I. Acne excoriation: a protective device. *Clin Exp Dermatol* 1983; 8: 65-8
38. Cotterill JA. Dermatologic nondisease: a common and potentially fatal disturbance of cutaneous body image. *Br J Dermatol* 1981; 104: 611-9