

Frequency of depression, anxiety and stress in patients with acne vulgaris

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Abstract

Objective To determine the frequency of depression, anxiety and stress among acne vulgaris patients.

Methods This cross-sectional study was conducted in Department of Dermatology at DHQ/ GHAQ Teaching Hospital/ Sahiwal Medical College, Sahiwal after approval from ethical review committee. A total of 100 patients of acne vulgaris filling the inclusion and exclusion criteria were enrolled. Acne severity was graded into three grades mild, moderate and severe. DASS (Depression Anxiety Stress Score) questionnaire (21 Questions) was translated and filled on proforma. Data was analyzed by SPSS.

Results In 100 patients, there were 58 females and 42 males. Mean age was 21 years in both genders. There was significant number of patients (39%) with family history of acne vulgaris. Majority of them were students (59%) and unmarried (82%). Mild (47%) and moderate (43%) severity of acne vulgaris constitute 90% of total patients and rest of patients (10%) belonged to severe form. Depression was observed in most cases (62%) as compared to anxiety (51%) and stress (40%) in different severity of acne patients. Moderate degree of depression 48% (n=30) and anxiety 49% (n=25) cases and mild degree of stress 50% (n=20) cases were noticed in majority among different severity of acne vulgaris.

Conclusion There is significant impact of psychological issues on acne vulgaris patient as shown by frequency of depression, anxiety and stress in this study. Thus, highlight the need of close liaison of dermatologist and psychiatrist in management of acne vulgaris.

Key words

Acne vulgaris, depression, anxiety, stress.

Introduction

Like other fields of medicine, dermatology also follows the Biopsychosocial model i.e. having a holistic approach in management of disorders, famously illustrated by O'Sullivan and others in their psycho-neuro-immune-cutaneous-endocrine model which highlighted the relationships of stress, immune system, environmental factors and skin disorders.¹ Acne

vulgaris is most commonly associated with psychiatric and psychological morbidity as with other skin diseases like psoriasis and atopic eczema.² Acne vulgaris is a chronic inflammatory condition involving pilo-sebaceous units of either gender. Clinically, patient presents with comedones, papules, pustules, nodules and cysts involving face, trunk and chest leading to scarring and pigmentation.

It is estimated that this skin condition affects 85% of young people between age 15-25 years.³ According to Global Burden of Disease, acne vulgaris is the eighth most prevalent disease

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worldwide with prevalence rate of 9.4%. It is highly prevalent in adolescents often continuing into adulthood.⁴ In adolescence, daily activities are more affecting the acne as in this age physical, intellectual development and emotional changes occur, therefore it can have significant psychosocial disturbances.⁵ Patients with acne feel self-conscious about recurrence of skin lesions especially their redness and scarring and often describe feelings of embarrassment, low confidence, depression, stress, anxiety and face difficulty when applying for jobs especially if they have tried many treatments.⁶ Generally more severe the acne, the greater the effect will be on the quality of life of the patients and the greater the effect on patient's self-esteem and body image and greater the risk of anxiety depression and suicide.⁷ Patients with acne are at a higher risk of developing chronic stress, anxiety and depression.⁸ In treating patients of acne, it is important that the health care professionals take into consideration the presence of psychological issues as well. Therefore, a strong trust should be established between the physician and the patient.⁹ However, the impact of acne is not always easy to assess clinically, so it is important that clinicians intervene early to treat it. Thus, helps in reducing the risk of scarring and the psychological impact of acne.¹⁰

The main objective of study was to evaluate psychological impact of acne vulgaris in central region of the Punjab, Pakistan by determining the frequency of depression, anxiety and stress on acne. In order to determine the frequency of depression, anxiety and stress in acne vulgaris patients DASS-21 (Depression, Anxiety and Stress Scale) was used. It comprises of 21 items (questionnaire), with 7 items (questionnaire) each assessing the depression, anxiety and stress. Every question is assessed with set of self-report scales (0, 1, 2, 3). Scores for depression, anxiety and stress are calculated by

adding the scores. Then sum of each item need to be multiplied by 2 to calculate the final score.

Methods

This cross-sectional study was carried out in Department of Dermatology in collaboration with Psychiatry Department at DHQ/GHAQ Teaching Hospital/ Sahiwal Medical College, Sahiwal, from August 1, 2019 to January 31, 2020 after approval from ethical review committee. One hundred patients of either sex of more than 12 years of age were selected randomly excluding patients with past history of topical or systemic steroids and psychiatric illness. An informed consent was taken from each patient. Demographic variables and clinical data were registered on predesigned proforma. After a detailed history, cutaneous and systemic examination was performed. Acne vulgaris was categorized according to Global Acne Grading System into three grades: mild, moderate and severe. DASS 21 (Depression Anxiety Stress Score) questionnaire (21 Questions) was translated in Urdu language for the patients by clinical psychologist and filled on proforma. Data was analyzed by Microsoft SPSS 23 Version. Following cut-off scores were used to grade the degree/ intensity of depression, anxiety and stress into normal, mild, moderate, severe and extremely severe (**Table1**).

Results

In this study of 100 patients, female gender predominates with 58% as compared to 42% of male gender. Majority of study patients (83%)

Table 1 Severity of depression, anxiety and stress.

	<i>Depression</i>	<i>Anxiety</i>	<i>Stress</i>
Normal	0-9	0-7	0-14
Mild	10-13	8-9	15-18
Moderate	14-20	10-14	19-25
Severe	21-27	14-19	26-33
Extremely severe	28+	20+	34+

Table 2 Distribution of patients according to gender and severity (n=100).

Gender	Severe	Moderate	Mild	No	Frequency
Male	6	15	21	42	42%
Female	4	28	26	58	58%
Total	10	43	47	100	100

Table 3 Distribution of patients according to age (n=100).

Age(years)	No	Percentage
12-25	87	87%
25-35	12	12%
>35	1	1%
Mean± SD		21.04±6.09

Table 4 Demographic data of patients (n=100).

Marital status	Married	18
	Single	82
Occupation	Student	59
	Housewives	23
	Unemployed	9
	Farmers	2
	Other	7
Family history of acne	Yes	39
	No	61

were in age group of 12-25 years with mean age of 21 years in both genders. (Table 2 and Table 3) There were very few patients who were married (18%). There were considerable number of patients (n=39) with family history of acne vulgaris. Students (59%) were among top of list in occupation data findings, followed by housewives (23%), unemployed (9%), farmers (2%) and others (7%). Mild (47%) and moderate (43%) severity of acne vulgaris contribute bulk of total study patients (90%). Small number of patients (10%) belonged to severe form of acne vulgaris. (Table 4).

Depression was noticed in most cases (n=62) as compared to anxiety (n=51) and stress (n=40) in different severity of acne patients. Female gender predominance was seen in different degree of depression. Moderate degree of depression was observed in 48% (n=30) majority of depression patients followed by mild degree 37% (n=23), severe degree 11% (n=7) and extremely severe degree 3% (n=2) among patients of acne.

Anxiety was seen in half (n=51) of total study patients. Moderate degree of anxiety was observed in 50% (n=25) of total anxiety cases among different severity of acne vulgaris. Mild degree of anxiety was found in 21% (n=11) followed by extremely severe in 15% (n=8) and severe degree in 14% (n=7) of the total anxiety cases.

Nearly 60% (n=60) of total study cases were calculated to fall in normal score range of stress. Mild degree of stress 50% (n=20) was noted most commonly among total stress cases followed by severe degree in 27% (n=11), moderate degree in 17% (n=7) and extremely severe degree in 5% (n=2) in different severity of acne vulgaris. (Figure 1 & 2).

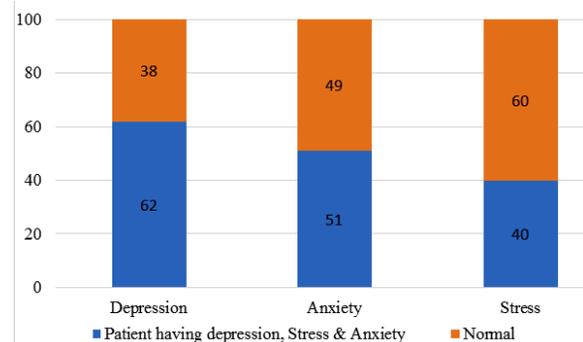


Figure 1 Bifurcation of patients as normal, depression, anxiety and stress.

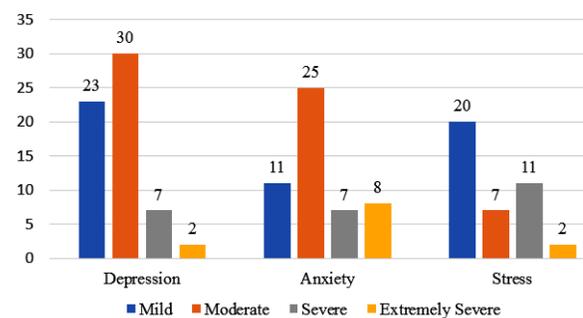


Figure 2 Degree of depression, anxiety and stress.

Discussion

There has been significant association of acne and psychiatric co-morbidities. In our study, report early females outnumbered males in seeking treatment for acne. This may be because, female as compared to male, visit doctor earlier for treatment as they are more image-conscious.^{11,12}

Young mean age favors previous studies that acne is highly prevalent in this age. Most of them were unmarried and students by occupation. This is in concordance with previous studies.^{3,6}

In this study, 40% patients had history of disease in their families which indicate that genetic factors influence susceptibility for acne.¹³

Males had more severe acne as compared to female patients. Similar finding was shown in various studies. It may be due to androgens and other mechanisms may be involved.¹⁴

Mild to moderate severity of acne had been observed in majority of patients in various studies. In contrast, severe form of Acne vulgaris was noticed in few or small number of patients.^{2,15} As compared to other medical specialties, dermatological disorders are not life threatening; instead, they alter the physical appearance and cause body disfigurement. Therefore, they affect one's psychosocial status, increasing vulnerability to stress, anxiety and depression; regardless of the severity of the skin disorder. Thus, in patients with acne vulgaris, the risk of anxiety, depression and stress is increased. Difficulties in social, occupational and academic fields have also been observed, although some different results had been recorded in various research studies.¹⁶

Some studies reported an increased risk of

anxiety and depression in acne vulgaris patients in comparison with healthy individuals, although some studies showed no difference.¹⁷⁻²¹

In present study, depression was noticed in majority of cases (62%). Moderate degree of depression was observed in most depression cases with different severity of acne vulgaris. This finding is in concordance with the former studies.^{22,23} In contrast, Anwar *et al.* from Saudi Arabia and Awad *et al.* from Egypt reported that frequency of anxiety was higher than depression among acne patients.^{24,25} One possible reason for this discrepancy may be the use of different assessment tools. The association of severity of acne with anxiety, stress and depression was noticed in the studies conducted previously.^{11,15} However, Duman *et al.* from Turkey reported that different results of depression and anxiety in acne patients.²¹ Similar pattern with difference in levels of anxiety and depression between male and female was also observed in other skin conditions like atopic dermatitis by Mina *et al.*²⁶

Stress was found in less frequency as compared to depression and anxiety among acne patients in the study conducted by Anwar *et al.*²⁴ In current study, females were having more psychological impacts than males which was shown in the studies carried out previously.^{12,27}

This study emphasize that dermatologist should keep psychological impact of disease in their mind while managing patient of acne vulgaris. It is required in cases especially if there is suspicion of depressive-anxious disorders or high emotional distress. This could be achieved by learning basic knowledge of psychotherapy and addition of psychosomatic treatment in management of such patients.

Conclusion

There is significant impact of psychological

issues on acne vulgaris patients as shown by frequency of depression, anxiety and stress in this study. Thus, highlight the need of close liaison of dermatologist and psychiatrist in management of acne vulgaris.

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