ORIGINAL ARTICLE

FREQUENCY AND MAGNITUDE OF ANXIETY AND DEPRESSION AMONG ACNE PATIENTS: A STUDY OF 100 CASES

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ABSTRACT

OBJECTIVE: To see the frequency and magnitude of anxiety and depression amongst patients with acne.

DESIGN: A cross sectional study.

SETTING: Out-patients departments of Psychiatry and Dermatology, Ziauddin Medical University, KDLB Campus, Karachi - Pakistan from 1st June 2005 till 31st August 2005.

METHODS: A total of 100 clinically diagnosed cases of acne belonging to both sexes and different age groups, fulfilling the inclusion criteria were enrolled. Only those patients were studied who could complete the Aga Khan University Anxiety and Depression Scale (AKUADS). The "psychiatric scale scores" achieved by "AKUADS", indicated the probability of anxiety and depression in these patients. All the patients scoring 19 or above were labeled as suffering from anxiety and depression. All the findings were recorded, compiled, tabulated and analyzed.

RESULTS: Of the 100 patients studied, there were 35 males (35%) and 65 females (65%). The minimum age of presentation was 14 years and maximum 38, with a mean of 21.4 years. Mild acne was seen in 52%, followed by moderate in 35% and severe acne was a feature in 11%, while 2% cases had acne excoriee. The duration of the disease ranged in between 1 month to 10 years, with a mean of 38 months. Forty two of the patients studied manifested anxiety and depression with a score of or above 19 (AKUADS) accounting for 21% with moderate acne followed by mild acne (12%), severe (7%) and acne excoriee (2%) (P< 0.05). Females accounted for 29% and males 13% of these patients. Patients with acne of recent onset had a mean score of 19, while those with a disease of at least 12 months had mean score 29. The patients with severe disease scored in the range of 24-38, moderate acne 19-26, mild acne 19-23 and acne excoriee 28.

CONCLUSION: Acne has a probable association with anxiety and depression. Clinical variables of the disease and sociodemographics influence the magnitude of anxiety and depression in patients with acne.

KEY WORDS: Acne. Anxiety. Depression. AKUADS.

INTRODUCTION

Presentation of psychological and emotional problems is very common in generel population as well as clinics of generel practitioners and consultants.[1] Disfigurement of skin can be a potential source of emotional distress and psychiatric illness, leading to impair psychosocial adjustments. Lifetime prevalence of depression in general population can be as high as 8.7%.[2] The exact prevalence of depression and anxiety in Pakistani population in general is not known. There are, however, different studies, which show prevalence of anxiety and depression to be within 7% to 50% in different urban squatters.[3,4] On the contrary, the frequency of depression among dermatological patients can be as high as 25% to 40% in comparison with a frequency of 6-8% in generel clinics.[5-7] The psy-

chosocial effect of acne was first recognized in 1948, when Sulzberger and Zaidens wrote, "There is no single disease, which causes more psychic trauma and more maladjustment between parents and children, more general insecurity and feelings of inferiority, and greater sums of psychic assessment than does acne vulgaris".[8] Acne has a demonstrable association with depression and anxiety; it affects personality, emotions, self-image and esteem, feelings of social isolation, and the ability to form relationships.[9] Various questionnaires have been used from time to time to determine the psychological effects of acne.[10,11] However, these questionnaires do not allow comparison with other groups. In the current study, Aga Khan University Anxiety and Depression Scale (AKUADS) was used. AKUADS is a self-administered questionnaire. It

comprises of 25 items with 13 psychological and 12 somatic questions. It is a screening scale in a widely understood local language Urdu and is validated in the community against a gold standard of assessment of a certified psychiatrist.[12] It has been used in other studies successfully.[13-15] The "psychiatric scale scores" indicate the presence of anxiety and depression. All the patients scoring 19 or above are labeled as suffering from anxiety and depression. However, the magnitude of the psychological problem can be correlated with the severity of the disease i.e. scale scores versus disease severity and the variables of life. The current study was aimed to see the frequency and magnitude of anxiety and depression amongst patients with acne.

PATIENTS AND METHODS

This study was conducted in the out patients departments of Psychiatry and Dermatology, Ziauddin Medical University, KDLB campus, Karachi - Pakistan. This cross sectional study was completed over a period of 3 months from 1st June 2005 till 31st August 2005. A total of 100 clinically diagnosed recent cases of acne were enrolled in the study. A written informed consent was taken from all these patients. Patients belonging to both sexes and different age groups were included. Patients were enrolled irrespective of severity of the disease. The disease was graded as mild, moderate or severe depending upon the predominant types of lesions. Patients with comedones being the predominant lesions were labeled as suffering from mild disease and those having papules and pustules mainly were classified as moderate acne. Patients with nodulocystic lesions were labeled as severe disease and those with scarring being the main feature as acne excoreie. Patients with any other concomitant dermatological problem were ruled out. Patients with subnormal mentality or any neurological problem were not studied. Patients having any other systemic disease were also excluded. Patients on systemic Isotretinoin therapy were excluded. Only those patients were studied who could complete the questionnaire of AKUADS. After a complete history and detailed examination, all the findings were recorded, compiled and tabulated. The details regarding the age, sex, duration, disease severity, distribution and scores achieved by AKUADS were analyzed. Chi square test was applied for statistical analysis and a P value below or equal to 0.05 was considered to be significant.

RESULTS

Of the 100 patients studied, there were 35 males

(35%) and 65 females (65%). **Table I** reveals the age and sex distribution of the patients enrolled. The minimum age of presentation was 14 years and maximum 38, with a mean of 21.4 years. The grading of the acne with sex distribution is presented in **Table II**. Mild acne was seen in 52% cases, followed by moderate in 35% and severe acne was a feature in 11% cases, while 2% had acne excoriee. Face (89%) was the most frequent site of involvement followed by back (25%), upper limbs (15 %) and scalp (5%). The duration of the disease ranged from 1 month to 10 years, with a mean of 38 months. Of the enrolled patients, 41 were married comprising 28 females and 13 males. Forty two patients manifested anxiety and depression with a score of or above 19 (AKUADS) accounting for 21% with moderate acne followed by mild acne (12%), severe (7%) and acne excoriee (2%) (P< 0.05). Females accounted for 29% and males 13% of these patients. Thus, 29 females (44%) of the enrolled 65 females while 13 males (37%) of 35 had AKUADS score of above 19. Thus, the frequency of anxiety and depression was slightly high in females. The mean (AKUADS) score for patients scoring above 19, aged 11-20 years was 28, followed by 25 for the age group 20-30 years. The mean score for the older group i.e. 30-40 years was 21. Of the 42 patients, only 10 were married, indicating that marital status also influenced the frequency and magnitude of anxiety and depression in acne. Patients with acne of recent onset had a mean score of 19, while those with a disease of at least 12 months had mean score 29. The patients with severe disease scored in the range of 24-38, moderate acne 19-26, mild acne 19-23 and acne excoriee 28. One female and 1 male with severe disease scored minimal i.e. 24, while 2 females and 1 male achieved the highest score i.e. 38. Of the patients with moderate disease, 2 females and 2 males scored the highest i.e. 26 and 2 females and 1 male touched the bottom score (19-26) of 19. Among the patients with mild disease (score range 19-23), one female and 2 males stood 19, while 3 females and 1 male scored the highest (23). Both the females with acne excoriee scored 28 (**Table III**).

TABLE I:
AGE AND SEX DISTRIBUTION OF CASES (n=100)

Age	Females	Males	Total
11-20 years	40 (40%)	18 (18%)	58 (58%)
21-30 years	21 (21%)	15 (15%)	36 (36%)
31-40 years	4 (4%)	2 (2%)	6 (6%)
Total	**65 (65%)**	**35 (35%)**	**100**

TABLE II:
SEVERITY OF DISEASE AND SEX RATIO (n=100)

Severity	Females	Males	Total
Mild	35 (35%)	17 (17%)	52 (52%)
Moderate	24 (24%)	11 (11%)	35 (35%)
Severe	4 (4%)	7 (7%)	11 (11%)
Acne excoriee	2 (2%)	0	2 (2%)
Total	**65 (65%)**	**35 (35%)**	**100**

TABLE III:
AKUADS - SCORES ABOVE 19 MEANS PROBABLE ANXIETY AND DEPRESSION (n=100)

Severity	Females	Males	Total
Mild	9 (9%)	3 (3%)	12%
Moderate	15 (15%)	6 (6%)	21%
Severe	3 (3%)	4 (4%)	7%
Acne excoriee	2 (2%)	0	2 (2%)
Total	**29%**	**13%**	**42%**

DISCUSSION

The field of psychodermatology has developed as a result of increased interest and understanding of the relationship between skin disease and various psychological factors.[16] An appreciation for the effects of sex, age and location of lesions is important, as well as the bi-directional relationship between skin disease and psychological distress.[17] Acne has a demonstrable association with depression and anxiety; its substantial influence is likely related to its typical appearance on the face, and would help explain the increased unemployment rate of adults with acne.[18-20] Moreover, acne patients report greater levels of anxiety and depression than other medical populations including cancer and other dermatology patients.[9] Various questionnaires have been used from time to time to determine the psychological effects of acne.[10,11] In this study, AKUADS was used. This simplified proforma facilitated the rates of psychiatric caseness to be calculated for the current study. All the patients scoring equal to or above 19 were labeled as suffering from anxiety and depression. The degree of psychiatric co-morbidity in dermatological patients varies in accordance with the setting of a study; disease itself and the scale used.[21] In this study, mild acne was seen in 52% patients, followed by moderate

in 35% and severe acne 11%, while 2% cases had acne excoriee. Of the patients enrolled, 42 scored 19 or above indicating a frequency of 42% for anxiety and depression in the studied sample (P< 0.05). Moderate acne was seen in 21% patients followed by 12% with mild acne, while severe disease was a feature in 7% and acne excoriee in 2% cases. In our study, females (44%) had a higher frequency as compared to males (37%). This finding is in contrast to the study by Asad F et al[22], who reported no sex preponderance. On the contrary, Kellet[9] has reported a higher frequency of anxiety and depression among male patients with acne. Thus, the frequency of the psychiatric caseness in both genders can vary from one study to another. Moreover, the scale employed can also influence the frequency. The mean AKUADS score for patients scoring above 19, aged 11-20 years was 29, followed by 25 for the age group 20-30 years. The mean score for the older group i.e. 30-40 years was 21. Asad F et al[22] have reported a higher frequency of anxiety and depression in patients aged below 20 as compared to those above 20 years. Similar finding consistent with ours has been reported in literature.[23] Similar finding has also been reported in a study employing "Carrol Rating Scale for Depression".[24] Thus, the young age is particularly vulnerable to anxiety and depression, which adds to the cosmetic effect of acne of all grades.[25] The cosmetic effect of acne can result in significant emotional upheaval. Similarly, the high frequency of anxiety and depression amongst unmarried, in this study is supported by reports in literature.[23] It is possible to compare the relationship between clinician's and patient's assessment of severity of acne and both usually correspond to one another. The patients with the severe disease scored in the range of 24-38, moderate acne 19-26, mild disease 19-23 and acne excoriee 28. Depression has a significant association with severity and a suffering from the disease.[25] Asad F et al have also claimed higher scores for anxiety and depression with increasing severity of acne. Malamore et al[26] also correlate the anxiety and depression scores with severity of acne. Therefore, the finding in this study is well on agreement with the reports in literature.[21] The duration of disease has a direct correlation with the extent of anxiety and depression. The scores of anxiety and depression in acne vulgaris increase with the duration of illness.[22] In this study, the minimal duration of illness was 1 month in contrast to the maximum of 37 months. However, patients with a disease of 1 year or

more had higher scores. So, the fact that duration of the disease influences the level of anxiety and depression is consistent with the past study.[22] Motiley RJ et al[27] have reported reverse figures as compared to this study. Thus, the finding can vary in different studies. So, the clinical variables of disease and sociodemographics influence the extent of anxiety and depression in patients with acne variables.

CONCLUSION

It can be concluded from this study that acne is likely to be associated with anxiety and depression. The magnitude of this psychological upset is in turn influenced by severity, distribution, duration of disease and the extent of scarring. Different variables of life like age, sex, marital status and employment also affect the magnitude of acne associated anxiety and depression.

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