Research Paper

Medical Science

A Study of Presence of Depression in Acne Vulgaris Patients

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ABSTRACT

Aims and objectives- Studies on depression in acne vulgaris patients are limited. The present study was planned to find the presence and extent of depression and its association with various parameters like age, sex, educational status, scarring of the patient. Material and methods- This cross sectional study was conducted in Department of Dermatology from 2012 to 2014. The sample consisted of 80 patients diagnosed as acne vulgaris and graded on clinical grounds. Further these patients were subjected to Beck's Depression Inventory (BDI). Some demographic study and then scoring was done from the data collected. Result- High BDI scores were seen in patients of higher grade of acne , females, lower educational levels, severe acne scarring. Conclusion-. BDI score was significantly associated with severity of acne, scarring, lower educational status of the patient.

KEYWORDS : BDI, acne vulgaris, depression, correlation

INTRODUCTION

Acne is a chronic inflammatory disease of pilosebaceous unit, manifesting generally in adolescence with pleomorphic lesion like comedones, papules, nodules, and cyst. Although all age groups may be affected by its many variants, acne is primarily a disorder of adolescence [1]. Acne has undeniable psychosocial impact, and affected individuals have increased likelihood of self-consciousness, social isolation, depression and even suicidal ideation. [2]

The disease usually runs a long course. During the period of activity the course is variable with spontaneous flare ups and remissions. After treatment, scar & pigmentation are the major complications, which also impacts the psychological status of the patient as acne does.

Acne vulgaris is influenced by diverse factors, hence various therapeutic modalities exist. With proper treatment, effective control of lesions can be achieved and dreadful sequelae prevented.

Severe acne especially in adolescents and young adults has been associated with a variety of psychological consequences. As many as 30-50% of the patients aged 12-30 years suffer from psychosomatic problems. This includes depression, anxiety, low self-esteem, body image problems, self-consciousness, lack of self confidence and anger. Severe acne can have a negative impact on self-image, psychological development and social interaction, leading to poor quality of life. Acne has also been associated with suicidal ideation, even in its mild form [3,4]. The severity of the psychological distress appears to correlate with the patient's rating of acne severity.

Longitudinal evaluation of psychometric outcomes has demonstrated that effective treatment of acne was accompanied by improvement in self-esteem, affect, obsessive-compulsiveness, shame, embarrassment, body image, social assertiveness, and self-confidence. [5]. The BDI is a valid and reliable measure of the intensity of depressive symptomatology and has been used extensively in research studies designed to assess the efficacy of pharmacological interventions and in the detection of depression in medical patients [6]

AIMS
* To study the socio-demographic profile of patients of acne
* To study the presence and extent of depression in acne patients
* To assess and delineate various factors affecting the depression, if any.

MATERIAL AND METHOD

After approval from institutional ethics committee, this cross sectional study was undertaken by the Department of Dermatology in a tertiary teaching hospital with an attached medical college from 2012 to 2014. Patients diagnosed as acne vulgaris patients on clinical grounds were then graded for severity of acne. Their demographic data collected. They were subjected to Beck's depression inventory for their psychological evaluation. This multiple-choice questionnaire has 21 groups of statements with the score for each statement ranging from 0 to 3, and the total maximum score being 63. A score of 0-10 is considered as normal,11-16 –mild mood disturbances, 17-20 borderline clinical depression, 21-30 moderate depression, 31-40 severe depression and over 40 is extreme depression.

Inclusion criteria-
All patients of acne vulgaris
Patients belonging to either sex but more than 16 yrs of age.
Patients willing to participate in the study.

Exclusion criterion-
Patients not willing to give informed consent
Patients who had taken isotretinoin therapy in past 6 months.
Patients with history of mental disorder.

Materials:
Specially designed proforma for recording socio-demographic details
Beck Depression Inventory.

RESULTS
Socio-demographic profile of the patients revealed following findings:
Out of the 80 patients, 57.5% were males and 42.5% were females (table 1). Most of the patients i.e. 38.8% belonged to the age group 21-25 years, 30% belonged to the age group of 16-20 years while 22.5% were from 26-30 age group (table 2). Around 43.75% patients were educated till intermediate while the rest had a higher education. 73.75% were unmarried and only 26.25% were married.(table 3)

Study of the phenomenology of disease and clinical details of patients showed that -
Majority of the patients, 43.75% (almost half) suffered grade 3 level of acne severity. 21.25% were of grade 2, 21.25% were of grade 4 and only 13.75% patients were of grade 1 acne vulgaris. (Table 4)

Beck depression scoring was highest in grade 4 acne with the mean

of 17.35 ± 8.53. Grade 3 patients had the BDI mean score of 12.89 ± 8.03. Grade 2 patients had a lesser BDI mean score of 10.70 with 4.57 . Grade 1 patients had the least score of 9.36 ± 5.0 which also points to greater psychological distress with increasing severity of the disease. The difference between the means of BDI scores was clinically significant.(table 5)

According to the Beck Depression Inventory, 62.50% of the patients had normal mood, 11.25% had mild mood variation , 8.75% patients had mild depression, 13.75% had moderate depression and 03.75% had severe depression.(table 6)

BDI score of depression in females (14.82± 6.59) was more than males (12.26± 7.69) (table 7)

Out of 80 patients, 43.75% were educated till intermediate and 56.25% had higher education. There was statistically significant negative correlation (p value= 0.0133) between education level and BDI score which shows that lower education is significantly associated with higher BDI scores. Educated patients have better mental status and understanding of the disease. (table 7)

Out of 80, 50.0% patients had scarring type of acne which closely correlated to grade 3 and 4 disease. On the other hand, rest of the patients had non scarring type of acne with mean BDI score of 9.92 ± 4.53. the correlation between scarring and BDI score was statistically significant with the p value of 0.000 which shows that scarring leads to poor mental status.(table 8).

Study of various illness related variables in relation to the BDI score (Table 1)-
Table no 1 SEX DISTRIBUTION

SEX	NO OF PATIENTS
Male	46 (57.5%)
Female	34 (42.5%)
Total	80

Table 2- AGE DISTRIBUTION

AGE GROUP(YRS)	NO.OF CASES	PERCENTAGE
16-20	24	30.0%
21-25	31	38.8 %
26-30	18	22.5%
>30	07	08.75 %
Number of cases	80	

Table 3- MARITAL STATUS

MARITAL STATUS	NO.OF PATIENTS (N=80)	PERCENTAGE
Married	21	26.25%
Unmarried	59	73.75%

Table no 4
SEVERITY OF ACNE

GRADE OF ACNE	NO. OF PATEINT (N=80)	PERCENTAGE
I	11	13.75%
II	17	21.25%
III	35	43.75%
IV	17	21.27%

Table no 5
VARIATION OF BDI WITH SEVERITY OF DISEASE

SEVERITY	TOTAL BDI SCORE	BDI MEAN ± SD	P VALUE
I	103	9.36± 5.00	0.018
II	182	10.70 ± 4.57	
III	451	12.89 ± 8.03	
IV	295	17.35 ± 8.53	

TABLE NO 6
DISTRIBUTION OF PATIENTS IN VARIOUS GRADES OF BDI

BDI SCORE	NO OF PATIENTS	PERCENTAGE
≤10 (normal mood)	50	62.50%
11-16 (mild mood disturbance)	09	11.25%
17-20 (mild depression)	07	8.75%
21-30 (moderate depression)	11	13.75%
>30 (severe depression)	3	03.75%
TOTAL	80	

Table no 7
SEX DISTRIBUTION AND EDUCATIONAL STATUS WITH BDI SCORE

	NO OF PATIENTS	BDI SCORE (MEAN ±SD)	P VALUE
Male	46 (57.5%)	12.26 ± 7.69	0.0609
Female	34 (42.5%)	14.82 ± 6.59	
Till intermediate	35 (43.75%)	15.03 ± 8.36	0.0133
Above intermediate	45 (56.25%)	11.22 ± 6.50	
total	80		

Table no 8
VARIATION OF BDI SCORE WITH SCARRING

	NO OF PATIENTS	BDI SCORE (MEAN ± SD)	P VALUE
Scarring	40 (50.0%)	16.15± 8.81	0.000
Non scarring	40 (50.0%)	9.92 ± 4.53	
Total	80		

DISCUSSION
There have been several attempts in the past to study the association of depression with acne vulgaris. 6% of acne patients in one study reported active suicidal ideation.[8] Clinically important depression and anxiety has been reported in 18% and 44% of acne patients respectively. [9]. Furthermore, in another study, acne patients reported higher depression and anxiety scores compared to psoriasis patients and those attending oncology or general dermatology clinics .[5] Medical practitioners including the dermatologists have always overlooked the psychological impact of a disease since a long time.[11] The time has come when treatment of acne has to be substituted with counselling, proper segregation of patients on the basis of extent of mental trauma. Delineating the causes and their effect on psyche of the patient will help the doctor in better treatment. [12,13]

Patients included in this study were categorised into four grades of acne on the basis of severity. Majority of patients 43.8% had grade III acne. 21.3% of patients had grade II and IV acne. Higher number of grade III acne could be explained by this being a tertiary care centre.

The analysis showed that 26.3% had mild to severe form of depression (BDI score of more than 16) with 3.4% patients having severe variety (BDI score of more than 30) (Table 6). The mean BDI score increased with the severity of the acne.(Table 5). Another study showed a direct link between acne severity and level of clinical depression. [10]

Correlations between baseline variables were studied. It was interesting to note that depression scoring and level of education had significant negative correlation (Table 7). These reports correlate with another study.[14] Depression is usually not correlated with age and sex .[15,16] In this study, the association between sex and depression was also insignificant though the mean BDI scores were more in females (Table 7). In this study, scarring and depression were significantly negatively associated necessitating early intervention and proper counselling. (Table 8).

Limitations
Small sample size and a single sited study limits its application to

general population.

CONCLUSION

A number of dermatological diseases like eczema, psoriasis have been linked to poor mental status in various studies. The results of this study are (a) negative association between education and depression levels; (b) positive association between increasing severity of acne and scarring with increasing BDI score. Larger cohort based studies are further needed to provide ample data but a vigilant medical practitioner needs to look beyond

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