

## ASSESSMENT OF PSYCHIATRIC ILLNESS IN PATIENTS WITH ACNE VULGARIS

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### ABSTRACT

**Background:** Acne vulgaris, is one of the most common skin diseases, it is highly prevalent in adolescents. However, it is also prevalent among the adult population. The magnitude of acne vulgaris is between 30% to 85% in young adults and adolescents. Cases of acne have been demonstrated as the symptoms of depression and anxiety. Many researches showed that patients with acne have problems with interpersonal relationships and their self-image. These patients have generally exhibited signs of social anxiety, depression, and suicidal tendencies and thoughts. **Material & Methods:** A total of 50 patients (40 women and 10men) who have visited the dermatology department at our hospital between August 2016 and January 2017. These diagnosed patients with adult acne were enrolled for the study by simple random sampling. The control group consisted of 50 healthy subjects without a known clinical disease (20 men and 30 women). **Results:** The SCL 90-R GSI ( $Z=-6.78$ ,  $p<0.001$ ), somatization ( $Z=-6.46$ ,  $p<0.001$ ), depression ( $Z=-7.01$ ,  $p<0.001$ ), and anxiety scores ( $Z=-7.03$ ,  $p<0.001$ ) were statistically significantly higher in the case group than the control group. A very strong statistically positive correlation was reported between the following SCL 90-R subscales: GSI, somatization, depression, and anxiety. **Conclusion:** Incidence of common psychiatric disorders was occurring with high frequencies in acne vulgaris patients. Adult patients with acne vulgaris were experiencing psychosomatic disease at higher rates.

**Keywords:** Acne, Anxiety, Depression.

### INTRODUCTION

Acne vulgaris is one of the most common skin diseases, it is highly prevalent in adolescents. However, it is also prevalent among the adult population. The magnitude of acne vulgaris is between 30% to 85% in young adults and adolescents (1). Acne vulgaris is an inflammatory disorder of pilosebaceous glands on the skin of mainly the face and also the trunk (2). Androgens may also play important role in its pathogenesis (3). Acne vulgaris is most commonly present on the face as a chronic disorder, and it is often

because of scarring of the facial skin and many times result in psychological illness. The mean age of persons with acne vulgaris present in dermatology departments for the last ten years has been raised from 20 years to 27 years (4). This increased incidence accounts for the increase in the prevalence of acne vulgaris in the young population. The overall data on the prevalence of acne vulgaris among adults is inadequate. There is also increased awareness seen

about the disease and regarding contemporary effective treatments. The total number of patients over the last 25 years treated for acne vulgaris was increasing, and most of these patients were female (5). The reported prevalence of acne vulgaris in adults was 3% among males and 11% to 12% among females. Acne vulgaris in the adult population is empirically defined as the occurring of acne over the age of twenty-five (6). Adult acne is further classified into two types: persistent acne vulgaris and late-onset acne vulgaris. Acne which is persisting even after 25 years of age is defined as persistent acne vulgaris. Acne which is occurring the first time after 25 years of age is defined as late-onset acne vulgaris. Both these types are majorly prevalent in the female population (7). It had been observed that psychosomatic clinical findings are more prevalent in patients with acne vulgaris and also the risk of suicides was also greater in these patients. Severe cases of acne have been demonstrated as the symptoms of depression and anxiety (8). Many researches showed that patients with acne have problems with interpersonal relationships and their self-image (9). These patients have generally exhibited signs of social anxiety, depression, and suicidal tendencies and thoughts (10). In the present study, we tried to find out the prevalence of common psychiatric illnesses in patients with acne vulgaris.

## **MATERIALS & METHODS**

The present observational study was conducted at a tertiary care hospital. A total of 50 patients (40 women and 10men) who were visited the dermatology department at our hospital between August 2016 and January 2017. These diagnosed patients with adult acne were enrolled for the study by simple random sampling. The control group consisted of 50 healthy subjects without a known clinical disease (20 men and 30 women). Institutional Ethics Committee Clearance was taken before the start of the study and written informed consent for the study purpose was obtained from all the patients. All the patients were subjected to a detailed clinical examination in accordance with pretested proforma and demographic data recorded such as age, gender, educational and marital status. A detailed history

was taken from patients of both groups. Patients who had neurological, medical, and psychiatric diseases, alcohol or other substance abusers, patients with comorbidities, and patients on medications (e.g., retinoids) were excluded from the study. The data were analyzed using MS Excel 2010, Epi Info v7, and SPSS v22.

## **Symptom Checklist 90-Revised**

This psychiatric screening tool was used in the present study to measure the levels of psychiatric symptoms and also the negative stress reactions. It was designed for patients older than 17 years or who passed out from high school. It comes with no time limitation and it comprises 90 items that are evaluated on a Likert scale (0=none, 1=Very Little, 2=Moderate, 3=Much, and 4=Very Much). Three total scores separately can be calculated. The Global Symptom Index (GSI) represents a general mean score which is proportional to the reflection of discomfort felt by the psychiatric illness. It ranges from 0 to 4 points. The cut-off score is generally considered at 1.0. The Symptom Checklist 90-Revised (SCL 90-R) was formulated by Derogatis (11).

## **RESULTS**

In the present study, 50 patients were enrolled, out of them, 38 patients had acne located on the face, 6 patients had acne on the back, and 8 patients had acne scattered across the face, neck, chest, and back. Thirty-two patients had acne vulgaris since their adolescence and 18 patients had acne that occurred after adolescence. The patient group and control group were matched in terms of demographic data. The mean age of the patient group was  $27.87\pm 3.75$  years and for the control group, it was  $28.49\pm 5.23$  years. Educational level was  $13.12\pm 3.48$  years for the patient group and  $14.36\pm 2.87$  years for the control group. Twenty-four of the patients were married and 26 were single among cases, whereas 29 members of the

control group were married and 21 were bachelors (Table 1).

**Table 1: Socio-demographic data of groups**

	Case group	Control group
Age (years)	27.87±3.75	28.49±5.23
Education (years)	13.12±3.48	14.36±2.87
Male	10	20
Female	30	30
Married	24	29
Single	26	21

**Table 2: The statistics comparison of groups**

	Case group (Mean±SD)	Control group (mean±SD)	P value
SCL 90-R Global Symptom Index	1.36±0.41	0.32±0.46	<0.001
SCL 90-R somatization	1.33±0.45	0.48±0.47	<0.001
Male SCL 90-R depression	1.55±0.47	0.39±0.51	<0.001
Female SCL 90-R anxiety	1.34±0.42	0.36±0.42	<0.001

The SCL 90-R GSI ( $Z=-6.78$ ,  $p<0.001$ ), somatization ( $Z=-6.46$ ,  $p<0.001$ ), depression ( $Z=-7.01$ ,  $p<0.001$ ), and anxiety scores ( $Z=-7.03$ ,  $p<0.001$ ) were statistically significantly higher in the case group than the

control group. A very strong statistically positive correlation was reported between the following SCL 90-R subscales: GSI, somatization, depression, and anxiety. In addition, there was a moderately strong statistically positive correlation also observed between scores on those subscales in both the patient and control groups.

## DISCUSSION

The present study aimed to evaluate psychiatric disorders among adult patients with acne vulgaris. The case and control groups were assessed using the SCL 90-R scale. We enrolled patients with acne who had no symptoms of psychiatric illness and also did not receive treatment for psychiatric illness. We used the SCL 90-R GSI, somatization, depression, and anxiety subscales for the present study. Out of them, results of the SCL 90-R GSI subscale were statistically significant in the case group than the control group. This reported that psychiatric illness was generally more prevalent in patients with acne vulgaris. The other subscales SCL 90-R scores (i.e., somatization, depression, and anxiety) were also statistically significant in acne vulgaris patients than the control group.

The findings of the present study were consistent with studies conducted by Yazici et al reported among 61 patients with acne that anxiety and depression were found significantly higher, and quality of life was reduced. They worked on the Hospital Anxiety and Depression Scale for both anxiety and depression (12). Another study conducted by Halvorsen et al reported a positive association between acne and its severity with suicidal tendency and mental health problems. They studied an approx. of 3,775 adolescent patients aged 18 to 19 years. Out of them, 14% of patients had severe acne vulgaris. Nearly 1 in every 4 patients recorded to had suicidal thoughts. Suicidal tendencies were reported 2 times higher in female patients than in the control group, and this variation may increase to 3 times than the male patients. Mental health problems were found in one-fourth of the adolescents who had severe acne (13).

However, these researches were consistent with the results of the present study, we reported that acne vulgaris significantly leads to psychological illness that may also compromise emotional distress and social anxiety, which ultimately leads to suicidal ideation (14). Social phobia was also reported in 45.7% of 140 patients in a previous study (15). A previous study conducted in New Zealand by Purvis et al reported that 64.3% of 9,567 children aged 12~18 years observed with “acne problem,” 1,294 out of the 14.1% had a clinically significant sign and symptoms of depression, and 432 (4.8%) had anxiety symptoms. There was a statistically positive correlation found between the depressive symptoms and the severity of acne (16). In another study, anxiety levels were studied in patients with acne, and it was found statistically higher with a positive correlation between acne severity and anxiety level (17).

The characteristic feature of the present study is that systemic treatment was not given to any of the patients. However, many studies reported that isotretinoin treatment may precipitate symptoms of depression (18).

## CONCLUSION

We concluded from the present study that the incidence of common psychiatric disorders occurs with high frequencies in acne vulgaris patients. The present study reported that adult patients with acne vulgaris were experiencing psychosomatic disease at higher rates.

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