EVALUATION OF PSYCHIATRIC MORBIDITY IN PATIENTS WITH ACNE VULGARIS

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Abstract

Background: Acne vulgaris is reported as an inflammatory disease of pilosebaceous glands of the skin which mainly occur on the face and trunk. Acne is among one of the most common skin conditions which commonly seen in adolescent's population. However, it can also present among the adult population.

Material & Methods: The present cross-sectional prospective study 100 patients who were diagnosed with acne vulgaris and 100 controls who were not having acne and without a known clinical disease were enrolled for present study by simple random sampling. Written informed consent was taken from each study participant.

Results: SCL 90-R Global Symptom Index was higher and statistically significant (P value <0.05) among acne group in compared to control group. The mean values of SCL 90-R somatization was higher and statistically significant (P value <0.05) among acne group in compared to control group. The mean values of Male SCL 90-R depression was higher and statistically significant (P value <0.05) among acne group in compared to control group. The mean values of Female SCL 90-R anxiety was higher and statistically significant (P value <0.05) among acne group in compared to control group.

Conclusion: We concluded from the present study that acne vulgaris is significantly associated with psychiatric disorders. Patients with acne vulgaris and found that higher prevalence of anxiety and depression among them which was significantly associated with poor quality of life.

Key words: Acne, Anxiety, Depression.

INTRODUCTION

Acne vulgaris is reported as an inflammatory diseases of pilosebaceous glands of the skin which mainly occur on the face and trunk (1). Acne is among one of the most common skin conditions which commonly seen in adolescent's population. However, it can also present among the adult population. In various researches the prevalence of acne vulgaris was reported between 30% to 85% among adolescents and adult population (2). Some researchers reported that androgen hormones may also play significant role in pathogenesis of acne (3). Some previous studies reported that scarring due to acne on the facial skin may result in psychological illness (4).

In various researches the incidence among male population was reported up to 3% and incidence

among female population was reported up to 11% to 12% (5). These incidence rates suggest and reflect the higher prevalence of acne vulgaris among young population. However, the overall diseases burden of acne vulgaris among adults is still a topic of research. In spite of higher disease burden increased awareness is also reported in various studies among general population and newer effective treatments are also available (6). In various researches that the presentation of acne can be classified into two types according to onset of acne and persistence: persistent acne vulgaris and late-onset acne vulgaris (7).

In various researches it was reported that individuals with acne vulgaris have showed problems with interpersonal relationships and showed concerns about self-image (8). In some studies, it had been also

reported that psychosomatic findings were prevalent among patients with acne vulgaris. Some studies reported high risk of suicides among these patients. In various researches it was reported that acne has been associated with the symptoms of depression and social anxiety (9). Hence, we conducted the present study, to evaluation of psychiatric morbidity in patients with acne vulgaris.

MATERIALS & METHODS

The present cross-sectional prospective study was conducted at our hospital with study duration of one year. Sample size of 200 was calculated at confidence interval of 95% and acceptable margin of error of 10% with the 95% study power. 100 patients who were diagnosed with acne vulgaris and 100 controls who were not having acne and without a known clinical disease were enrolled from SMS Medical Collage, Jaipur during October 2018 to March 2019 for present study by simple random sampling. Written informed consent was taken from each study participant.

All the study participants were subjected to a detailed clinical examination in accordance with pretested proforma and demographic data recorded. Detailed history was taken from both the groups. Patients who had diagnosed psychiatric diseases, patients who take alcohol or other substance abusers, patients on medications (e.g., retinoids) were excluded from the study. The psychiatric screening tool was used in present study was the Symptom Checklist 90-Revised (SCL 90-R) was formulated by Derogatis (1977) (10). Data analysis was carried out using SPSS v22. All tests were done at alpha (level significance) of 5%; means a significant association present if p value was less than 0.05.

RESULTS

In the present study, we enrolled 200 patients were enrolled, out of them 100 were the diagnosed patients with acne vulgaris and 100 were healthy controls. Out of the 100 patients with acne 76 patients had acne of the face, 12 patients had acne of the back, and 16 patients had acne scattered over face, neck, back and chest. 64 patients had acne from the adolescence and 36 patients had acne after their adolescence. The patient group and control group were matched to remove selection bias in terms of demographic data. The mean age of acne group was 25.6 ± 3.45 years and for the healthy control group it was 26.7 ± 5.24 years. Educational level was 15.4 ± 3.8

years for the acne group and 15.6 ± 2.7 years for the healthy control group. 61 of the patients were married and 39 were single, whereas 64 members of the control group were married and 36 were bachelors (Table 1).

Table 1: Socio-demographic data of groups

	<u>Case group</u>	<u>Control group</u>
Age (years)	25.6±3.45	26.7±5.24
Education (years)	15.4±3.8	15.6±2.7
Male	22	26
Female	78	74
Married	61	64
Single	39	36

In the present study on the basis of the Symptom Checklist 90-Revised (SCL 90-R) for the psychiatric evaluation among both the study groups it was found that values of SCL 90-R Global Symptom Index was higher and statistically significant (P value <0.05) among acne group in compared to control group. The mean values of SCL 90-R somatization was higher and statistically significant (P value <0.05) among acne group in compared to control group. The mean values of Male SCL 90-R depression was higher and statistically significant (P value <0.05) among acne group in compared to control group. The mean values of Female SCL 90-R anxiety was higher and statistically significant (P value <0.05) among acne group in compared to control group. (Table 2)

Table 2: The statistics comparison of both groups according to SCL 90.

	<u>Case group</u>	<u>Control group</u>	<u>P value</u>
SCL 90-R Global Symptom Index	1.35±0.42	0.33±0.44	<0.05
SCL 90-R somatization	1.32±0.47	0.49±0.46	<0.05
Male SCL 90-R depression	1.53±0.45	0.38±0.52	<0.05
Female SCL 90-R anxiety	1.36±0.40	0.37±0.43	<0.05

DISCUSSION

The aim of present study was to evaluation of psychiatric morbidity in patients with acne vulgaris. In the present study, we enrolled 200 patients were enrolled, out of them 100 were the diagnosed

patients with acne vulgaris and 100 were healthy controls. Out of the 100 patients with acne 76 patients had acne of the face, 12 patients had acne of the back, and 16 patients had acne scattered over face, neck, back and chest. 64 patients had acne from the adolescence and 36 patients had acne after their adolescence. The patient group and control group were matched to remove selection bias in terms of demographic data. The mean age of acne group was 25.6 ± 3.45 years and for the healthy control group it was 26.7 ± 5.24 years. Educational level was 15.4 ± 3.8 years for the acne group and 15.6 ± 2.7 years for the healthy control group. 61 of the patients were married and 39 were single, whereas 64 members of the control group were married and 36 were bachelors. Similar results were obtained in a study conducted by Yazici et al among 60 patients with acne vulgaris and found that higher prevalence of anxiety and depression among them which was significantly associated with poor quality of life (11). Similar results were obtained in a study conducted by Halvorsen et al among patients with acne vulgaris and found that reported positive association between acne vulgaris and mental health problems and suicidal thoughts. They reported psychiatric illness was higher and significantly associated with female gender (12).

In the present study on the basis of the Symptom Checklist 90-Revised (SCL 90-R) for the psychiatric evaluation among both the study groups it was found that values of SCL 90-R Global Symptom Index was higher and statistically significant (P value < 0.05) among acne group in compared to control group. The mean values of SCL 90-R somatization was higher and statistically significant (P value < 0.05) among acne group in compared to control group. The mean values of Male SCL 90-R depression was higher and statistically significant (P value < 0.05) among acne group in compared to control group. The mean values of Female SCL 90-R anxiety was higher and statistically significant (P value < 0.05) among acne group in compared to control group. Similar results were obtained in a study conducted by Sundström A et al among patients with acne vulgaris and found that reported positive association between acne vulgaris and mental health problems and suicidal thoughts (13).

Similar results were obtained in a study conducted by Purvis D et al among patients with acne vulgaris and found that reported positive association between acne vulgaris and social phobia (14). Similar results

were obtained in a study conducted by Purvis et al among patients with acne vulgaris and found that reported positive association between acne vulgaris and clinically significant sign and symptoms of depression and anxiety (15). Similar results were obtained in a study conducted by Wu SF et al among patients with acne vulgaris and found that reported positive association between acne vulgaris and clinically significant sign and symptoms of depression and anxiety (16).

CONCLUSION

We concluded from the present study that acne vulgaris is significantly associated with psychiatric disorders. Patients with acne vulgaris and found that higher prevalence of anxiety and depression among them which was significantly associated with poor quality of life.

REFERENCES

1. Zari S, Turkistani A. Acne Vulgaris in Jeddah Medical Students: Prevalence, Severity, Self-Report, and Treatment Practices. J Cosmet Dermatological Sci Appl [Internet]. 2017 Jan 19;07(01):67–76. Available from: <http://www.scirp.org/journal/doi.aspx?DOI=10.4236/jcdsa.2017.71007>
2. Tan AU, Schlosser BJ, Paller AS. A review of diagnosis and treatment of acne in adult female patients. Int J Women's Dermatology [Internet]. 2017 Dec 23; Available from: <https://www.sciencedirect.com/science/article/pii/S2352647517300862>
3. Nguyen CM, Beroukhim K, Danesh MJ, Babikian A, Koo J, Leon A. The psychosocial impact of acne, vitiligo, and psoriasis: a review. Clin Cosmet Investig Dermatol [Internet]. 2016;9:383–92. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/27799808>
4. Lynn DD, Umari T, Dunnick CA, Dellavalle RP. The epidemiology of acne vulgaris in late adolescence. Adolesc Health Med Ther [Internet]. 2016;7:13–25. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/26955297>
5. Durai PCT, Nair DG. Acne vulgaris and quality of life among young adults in South India. Indian J Dermatol [Internet]. 2015;60(1):33–40. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/25657394>
6. Bagatin E, Timpano DL, Guadanhim LR dos S,

- Nogueira VMA, Terzian LR, Steiner D, et al. Acne vulgaris: prevalence and clinical forms in adolescents from São Paulo, Brazil. *An Bras Dermatol* [Internet]. 2014;89(3):428–35. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/24937816>
7. Raju B, Nagaraju U. Quality of life among adolescents with acne in a tertiary referral centre in Bangalore, South India. *Indian J Paediatr Dermatology* [Internet]. 2017;18(2):94. Available from: <http://www.ijpd.in/text.asp?2017/18/2/94/203007>
 8. Basavaraj KH, Navya MA, Rashmi R. Relevance of psychiatry in dermatology: Present concepts. *Indian J Psychiatry* [Internet]. 2010 Jul;52(3):270–5. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/21180416>
 9. Zaenglein AL, Pathy AL, Schlosser BJ, Alikhan A, Baldwin HE, Berson DS, et al. Guidelines of care for the management of acne vulgaris. *J Am Acad Dermatol* [Internet]. 2016 May 1;74(5):945–973.e33. Available from: <https://www.sciencedirect.com/science/article/pii/S0190962215026146>
 10. Gül Aİ, Çölgeçen E. Personality traits and common psychiatric conditions in adult patients with acne vulgaris. *Ann Dermatol* [Internet]. 2015;27(1):48–52. Available from: <http://synapse.koreamed.org/search.php/2015.27>
 11. Yazici K, Baz K, Yazici A, Kokturk A, Tot S, Demirseren D, et al. Disease-specific quality of life is associated with anxiety and depression in patients with acne. *J Eur Acad Dermatology Venereol* [Internet]. 2004 Jul;18(4):435–9. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/15196157>
 12. Halvorsen JA, Stern RS, Dalgard F, Thoresen M, Bjertness E, Lien L. Suicidal Ideation, Mental Health Problems, and Social Impairment Are Increased in Adolescents with Acne: A Population-Based Study. *J Invest Dermatol* [Internet]. 2011 Feb;131(2):363–70. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/20844551>
 13. Sundström A, Alfredsson L, Sjölin-Forsberg G, Gerdén B, Bergman U, Jokinen J. Association of suicide attempts with acne and treatment with isotretinoin: retrospective Swedish cohort study. *BMJ* [Internet]. 2010 Nov 11;341:c5812. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/21071484>
 14. Bez Y, Yesilova Y, Kaya MC, Sir A. High social phobia frequency and related disability in patients with acne vulgaris. *Eur J Dermatol* [Internet].;21(5):756–60. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/21700535>
 15. Purvis D, Robinson E, Merry S, Watson P. Acne, anxiety, depression and suicide in teenagers: A cross-sectional survey of New Zealand secondary school students. *J Paediatr Child Health* [Internet]. 2006 Dec;42(12):793–6. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/17096715>
 16. Wu SF, Kinder BN, Trunnell TN, Fulton JE. Role of anxiety and anger in acne patients: a relationship with the severity of the disorder. *J Am Acad Dermatol* [Internet]. 1988 Feb;18(2 Pt 1):325–33. Available from: <http://www.ncbi.nlm.nih.gov/pubmed/2964458>