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Acne vulgaris and impact on psychological mood disorders status in patients attending skin OPD

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Abstract

Introduction: Acne is a chronic inflammatory disorder of the skin that most commonly presents during adolescence, a period with psychological instability. It has been known as a ubiquitous affliction with physical and emotional scars that persists throughout the life of the affected individuals. Besides experience of impaired functional status and decreased quality of life, it has been recently substantiated the psychological impacts of acne appearance and proved its-related negative emotional reactions in the patients.

Objective: To assess the acne vulgaris and impact on psychological mood disorders status in patients attending skin OPD.

Methods: Thirty four patients with acne vulgaris who consecutively attended the dermatology outpatient clinics in ----- were included. The study participants or their family members or relatives had no history of other skin disorders as well as no history of psychological problems. None of the patients had history of smoking and alcohol use. Moreover, none of them tended to special dietary patterns. The participants also had no history of anti-psychotic or anti-depressive drugs. Because of the potential effects of acne complications on late psychological events, the patients with these complications such as acne-related scars were not included into the study.

Results: The above table shows distribution of Acne was more common among adolescent age group, more commonly in 2nd decade of life with 76.47% percent of prevalence. The above table shows Acne was more common among females than in males with prevalence of 70.59%. This table shows Acne to be common among below poverty line adolescents (79.41%). 10 people (29.41%) had both depression and anxiety. This shows variances in the mood among persons with acne. 32.35% of the people did not have any mood disturbances. 44.12% of the people experienced sadness amounting to depression and 52.94% of them suffered from anxiety. Of the people who were suffering from depression and anxiety 29.41% showed both anxiety as well as depression.

Conclusion: The results of this study indicated that there is positive correlation between severity of stress and grade of acne. Therapeutic approaches can be adjusted according to stress levels and behavioral intervention like relaxation therapy could be an option in some cases. It is also necessary to take psychosocial factors into account in the therapy of acne patients.

Keywords: psychological, patients, OPD, Acne

1. Introduction

Acne is a chronic inflammatory disorder of the skin that most commonly presents during adolescence, a period with psychological instability. Acne is a very common skin condition of the face and upper trunk affecting millions of adolescents' everyday^[1]. It is of great interest and importance to explore it further to elucidate possible associated factors which may provide clues to its etiology.

The distribution of acne in populations has been shown to vary across gender [2-8], ethnicity [1, 9], socio-demographic variables [8, 10], cigarette smoking [11, 12], diet [13, 14], mental health problems and may even be associated with suicidal thoughts [15]. These studies have helped us identify risk factors for the development of acne and made us understand the burden this condition represents for young people. The importance acne may have on the daily life of adolescents must not be trivialized, and it has been demonstrated that the quality of life of acne patients is at the same level as patients with other chronic conditions such as asthma, epilepsy, diabetes, back pain and arthritis. [16] Since acne is a visual disease and starts in adolescents, as does an increase in the prevalence of depression and anxiety. It is particularly relevant to explore the way in which this skin condition is associated with psycho-social factors. Adolescence is an important and vulnerable period in most people's lives as it is the time of transition between the dependence of childhood to the independence of adulthood. There is, however, conflicting evidence about a coexistence of acne and mental health problems: some studies have found an association [17], while others have not been able to identify any. Isotretinoin therapy is used in the treatment of severe or recalcitrant acne. Several case reports have raised concern over the increased incidence of depression and suicide in patients receiving isotretinoin therapy [18].

2. Methodology

Thirty four patients with acne vulgaris who consecutively attended the OPD of Department Dermatology & Venereology, Dhaka Medical College and Hospital (DMCH) Dhaka, Bangladesh.

Were included. The study participants or their family members or relatives had no history of other skin disorders as well as no history of psychological problems. None of the patients had history of smoking and alcohol use. Moreover, none of them tended to special dietary patterns. The participants also had no history of anti-psychotic or anti-depressive drugs. Because of the potential effects of acne complications on late psychological events, the patients with these complications such as acne-related scars were not included into the study. Examinations were performed by a single dermatologist. The institutional ethical committee approved the study design and informed consent was obtained from all patients and controls. The results were analyzed by percentage methodology.

3. Results

The above table shows distribution of Acne was more common among adolescent age group, more commonly in 2nd decade of life with 76.47% percent of prevalence. The above table shows Acne was more common among females than in males with prevalence of 70.59%. This table shows Acne to be common among below poverty line adolescents (79.41%). 10 people (29.41%) had both depression and anxiety. This shows variences in the mood among persons with acne. 32.35% of the people did not have any mood disturbances. 44.12% of the people experienced sadness amounting to depression and 52.94% of them suffered from anxiety. Of the people who were suffering from depression and anxiety 29.41% showed both anxiety as well as depression.

4. Discussion

According to study conducted by Burton JL *et al* [2] among 1555 school children aged between 8-18 years, come done were present in a large population of even the youngest children and were universal by mid-teens and clinical acne appeared 2 years earlier in girls than in boys and the prevalence was reached at age of 14 years in girls and 16 years in boys. There after the prevalence of more severe grades of acne continued to increase steadily in boys but declined in girls. The age of menarche in girls didn't effect the severity of acne which ultimately developed. Our study too showed the prevalence to be more in the age group of 10-20 years accounting to 76 percent. Accounting to 76 percent. Smithard A *et al.*, [21] conducted a community based study regarding acne prevalence, knowledge about acne and physiological morbidity in mid adolescence in which 317 pupils from a school in Nottingham aged 14- 16 years were examined. An age appropriate, validated measure of emotional well-being, the Strength and Difficulties Questionnaire (SDQ) 22 and an Acne Management Questionnaire were used to assess participant psychological health, level of acne knowledge and health seeking behavior. There was a prevalence of acne in 50% of study sample. Participants with definite acne (12+lesions) (P <0.01) and girls (P <0.05) had higher levels of emotional and behavioral difficulties. Patient with acne were nearly twice as likely as those without acne to score in abnormal/borderline range of the SDQ (32% vs 20%; odds ratio 1.86; 95% confidence interval 1.03-3.34). Knowledge about the cause of acne was low (mean 45%) and was unrelated to acne status. According to secondary analysis conducted by Purvis D *et al.*, [15] of a cross sectional survey - Youth 2000 (New Zealand national survey of youth health). Among a total of 9567 secondary school students aged 12-18 years participated in the survey. The main outcome measures were self-reported acne, depressive symptoms (Reynold Adolescent Depression Scale >77)23, anxiety (Anxiety Disorder Index from Multidimensional Anxiety Scale for children) 24 and self-reported suicidal attempts. It revealed that 'Problem Acne' was associated with increased probability of depressive symptoms with odds ratio 2.04 (95% confidence interval 1.7-2.45); anxiety, odds ratio 2.3 (1.74-3.00) and suicidal attempts, odds ratio 1.83 (1.51-2.22) in a logistic model that included age, gender, ethnicity, school deciled and socio-economic status. The association of acne with suicidal attempts remained after controlled for depressive symptoms and anxiety, with odds ratio 1.5 (1.21-1.86) and was concluded that young people presenting with acne are at increased risk of depression, anxiety and suicidal attempts. Another study conducted by Saif Mutair Al Saedi Al Huzali *et al.*, [17] to determine the prevalence of depression among acne patients in King Faisal and King Abulaziz hospital in Makkah, Saudi Arabia in which 228 acne patients with their age ranged between 14 and 39 years (mean of 23.9 ± 5.7 years) were studied. Among them more than half of the participants were females (56.1%). Depression regardless of its severity was reported among 40.8% of acne patients. Severe depression was reported by 12.3% of acne patients while mild and moderate depressions were reported by 16.2% and 12.3% respectively. Extremely severe depression was not reported among any of acne patients. Age, gender and severity of acne were significantly associated with depression and it was concluded that mental problems as an important factor in acne but the casual relationship remains elusive. The

presence of acne can negatively affect quality of life, self-esteem, and mood in adolescents. Acne is associated with an increased incidence of anxiety, depression, and suicidal ideation. The presence of these and other comorbid psychological disorders should be considered in the treatment of acne patients when appropriate. A strong physician patient relationship and thorough history taking may help to identify patients at risk for the adverse psychological effects of acne. In addition to the effect of acne on the patient, family and social relationships may also be strained. Parents may worry about the short and long term repercussions of their child's appearance, such as being bullied at school or having permanent scarring from acne lesions. As teens gain independence during adolescence, their attitudes toward treatment and adherence to the prescribed regimen may be adversely affected. Parents and patients may not always be adequately educated about the causes and treatment of acne, which may further delay or affect successful treatment. Poor adherence to therapy is a barrier to successful acne treatment. Hence there is a need for a study to understand the link between mood disorders and acne.

5. Conclusion

The results of this study indicated that there is positive correlation between severity of stress and grade of acne. Therapeutic approaches can be adjusted according to stress levels and behavioral intervention like relaxation therapy could be an option in some cases. It is also necessary to take psychosocial factors into account in the therapy of acne patients.

6. References

1. Clayton RW, Göbel K, Niessen CM, R Paus, M A M vaan Steensel, X Lim. Homeostasis of the sebaceous gland and mechanisms of acne pathogenesis. *British Journal of Dermatology*. 2019; 181(4):677-690. <https://doi.org/10.1111/bjd.17981>
2. Burton JL, Cunliffe WJ, Stafford I, Shuster S: The prevalence of acne vulgaris in adolescence. *Br J Dermatol*. 1971; 85:119-126.
3. Kilkenny M, Merlin K, Plunkett A, Marks R. The prevalence of common skin conditions in Australian school students: 3. Acne Vulgaris. *Br J Dermatol*. 1998; 139:840-845.
4. Rea JN, Newhouse ML, Halil T. Skin disease in Lambeth. A community study of prevalence and use of medical care. *Br J Prev Soc Med*. 1976; 30:107-114.
5. Lello J. Prevalence of acne vulgaris in Auckland senior high school students. *NZ Med J*. 1995; 108:287-289.
6. Rademaker M, Garioch JJ, Simpson NB. Acne in schoolchildren: no longer a concern for dermatologists. *BMJ*. 1989; 298:1217-1219.
7. Larsson PA, Liden S: Prevalence of skin diseases among adolescents 12-16 years of age. *Acta Derm Venereol*. 1980; 60:415-423.
8. Dalgard F, Svensson Å, Holm JO, Sundby J. Self-reported skin morbidity in Oslo. Associations with socio-demographic factors among adults in a cross-sectional study. *Br J Dermatol*. 2004; 151:452-457.
9. Dalgard F, Holm JO, Svensson A, Kumar B, Sundby J. Self-reported skin morbidity and ethnicity: a population-based study in a Western community. *BMC Dermatology*, 2007; 7:4.
10. Cunliffe WJ. Acne and unemployment. *Br J Dermatol*. 1986; 115:386.
11. Schafer T, Nienhaus A, Vieluf D, Berger J, Ring J. Epidemiology of acne in the general population: the risk of smoking. *Br J Dermatol* 2001; 145:100-104.
12. Klaz I, Kochba I, Shohat T, Zarka S, Brenner S. Severe acne vulgaris and tobacco smoking in young men. *J Invest Dermatol*. 2006; 126:1749-1752.
13. Adebamowo CA, Spiegelman D, Berkey CS, Danby FW, Rockett HH, Colditz GA, *et al*. Milk consumption and acne in teenaged boys. *J Am Acad Dermatol*. 2008; 58:787-793.
14. Adebamowo CA, Spiegelman D, Berkey CS, Danby FW, Rockett HH, Colditz GA, *et al*. Milk consumption and acne in adolescent girls. *Dermatol Online J*. 2006; 12:1.
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 Paediat Child Health*. 2006; 42:793-796.
16. E Mallon, JN Newton, A Klassen, SL Stewart-Brown, TJ Ryan, AY Finlay; The quality of life in Acne; A comparison with general medical conditions using generic questionnaires; *The British Journal of Dermatology*. 1999; 140(4):672-676.
17. Saif Mutair Al-Saeidi Al-Huzali, Khalid Shaaf Al-Maliki, *et al*. Prevalence of depression among acne patients in King Faisal Hospital and King Abulaziz Hospital in Makkah, Saudi Arabia; *International Journal of Medical Science and Public Health*. 2014; 3(9):1150-1156.
18. Christina Y Chia. Whitney Lane, John Chibnall, Angel Allen, Elaine Siegfried; Isotretinoin therapy and mood changes in adolescents with moderate to severe acne; *Arch Dermatology*. 2005; 141(5):557-560.
19. Beck AT, Steer RA, Brown GK. Manual for Beck Depression Inventory II. San Antonio, Tx; Psychological Corporation. Fahmy Ali; Hamilton Anxiety Scale; Gale Encyclopedia of Mental Disorder, 1996-2003.
20. Smithard A, Glazebrook C, Williams HC. Acne prevalence, knowledge about acne and psychological morbidity in mid Adolescence: A community-based study. *Br J Dermatology*. 2001; 145:274-279.
21. Chiu A, Chon SY, Kimball AB. The response of skin disease to stress: Changes in the severity of acne vulgaris as affected by examination stress. *Arch Dermatol*. 2003; 139:897-900. <https://doi.org/10.1001/archderm.139.7.897>
22. Do JE, Cho SM, In S II, Lim KY, Lee S, Lee ES. Psychosocial aspects of acne vulgaris: A community-based study with Korean adolescents. *Ann Dermatol*. 2009; 21:125-129. <https://doi.org/10.5021/ad.2009.21.2.125>.
23. Poli F, Dreno B, Verschoore M. An epidemiological study of acne in female adults: Results of a survey conducted in France. *J Eur Acad Dermatology Venereol*. 2001; 15:541-545. <https://doi.org/10.1046/j.1468-3083.2001.00357.x>