

“Study of social anxiety and its relationship to clinical variables in patients of acne vulgaris”

Psychiatry

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ABSTRACT

INTRODUCTION

Acne vulgaris is chronic inflammatory disorder. Acne can have negative psychological impact manifesting in social situation as fear of having their faces being scrutinized by others which may lead to social anxiety. With this background, this study was conducted to 1) study social anxiety in acne patients 2) find out relationship between social anxiety and clinical variables of acne.

METHODOLOGY

100 patients of acne studied. Acne severity graded using Global Acne Grading System. Subjective grading of acne done by patient on visual analogue scale. Social anxiety was assessed using Liebowitz Social Anxiety Scale. Data thus collected subjected to statistical analysis.

RESULTS

Social anxiety was observed in 36% of the acne patients. In acne patients who had social anxiety lesions were severe and were localized mostly on face.

CONCLUSIONS

Acne vulgaris has potential to cause significant psychological distress and affect social functioning.

KEYWORDS:

Acne, Clinical variables, Social anxiety.

Introduction

Skin has power of expressing many bodily emotions including those of worry (picking), anxiety (pruritis and sweating), fear and anger (urticaria), guilt and shame (blushing), hostility, masochism and eroticism (dermatitis factitia). (1)

Acne vulgaris is the most common dermatological disease; affecting at least 85% of adolescents. Beyond the cosmetic concerns, acne may lead to psychological problems, which may negatively affect dermatological as well as psychological aspect of quality of life. Thus acne can affect psychological and social functioning.

Although there are many studies that discuss the psychological problems and psychiatric symptoms that result from acne, social anxiety and related factors have not been studied sufficiently. In consideration of the importance of body image and the cosmetic problems that acne may cause, it is clear that the level social anxiety should be studied in acne patients.

Now a days even in Indian society there is rising societal pressure and media generated emphasis for good external appearance and ideal perfect skin. Considering paucity of Indian studies, current study was undertaken to 1) assess social anxiety and 2) find out impact of clinical variables of acne on social anxiety.

Materials and methods:

Inclusion criteria:

- 1) Patients with definitive diagnosis of acne as made by dermatologist.
- 2) Patients of acne in 15-30 years of age group.
- 3) Patients who agree to give informed consent to participate in the study.

Exclusion criteria:

- 1) Patients with pre-existing psychiatric disorder prior to acne.

- 2) Patients with co-morbid medical and dermatological disorder.

- 3) Patients who used topical or systemic medicines predisposing to acne during one month before consultation (e.g. anabolic steroids, corticosteroids (topical, oral, injection), Corticotropin, Phenytoin, Phenobarbital, lithium, Isoniazid, Iodides, Bromides, Cyclosporine, and Azathioprine).

Methodology:

Prior to study, Ethics committee approval was taken. It was a cross sectional study conducted in a tertiary care teaching hospital in an urban area; where patients with acne vulgaris lesions were studied jointly by dermatologist and psychiatrist. Dermatologist diagnosed acne vulgaris and graded acne severity using Global Acne Grading Scale (GAGS). Also, other dermatological disorders were excluded by dermatologist by taking detailed dermatological history and examination of lesions.

These patients with definitive diagnosis of acne vulgaris were referred to psychiatrist for further assessment. After exclusion of co-morbid medical and dermatological and pre-existing psychiatric disease taking detailed history; 100 consecutive patients with definitive diagnosis of acne vulgaris, were briefed about the study and recruited after obtaining written informed consent. They were asked to subjectively rate their acne severity on visual analogue scale (VAS). Level of social anxiety was assessed using Liebowitz Social Anxiety Scale (LSAS). Acne related clinical variables (site of lesions, clinical and subjective severity) were noted on specially designed semi-structured proforma.

Data thus obtained were entered in Microsoft office excels 2007, analyzed by using SPSS 17.0 software. Results obtained were represented using frequency tables and bar diagram. Following test of significance were used: Chi-Square test, Post-hoc (standardised residual) test and Fisher's exact test.

Measures used:

1) Semi structured proforma : specially designed for the study to obtain the data about socio-demographic details of the patients, acne related variables and detailed history of psychiatric complaints and duration.

2) Global Acne Grading Scale (GAGS): In 1997, Doshi, Zaheer and Stiller devised a Global Acne Grading System (GAGS) for determining the severity of acne.[2] This system divides the face, chest and back into six areas (forehead, right cheek, left cheek, nose, chin, chest and back) and assigns a factor to each area. Lesions are given grades from 0-4 depending on their severity. Local score for each area is calculated and then a global score (GS:0-44) is obtained by adding local scores.

3) Visual Analogue Scale (VAS): It is a self reporting device. For patients to evaluate their acne severity subjectively on a scale of 0 to 10 patients are asked to rate their acne severity from 0 (I do not have acne) to 10 (my acne is very severe).

4) Liebowitz Social Anxiety Scale (LSAS) (3)

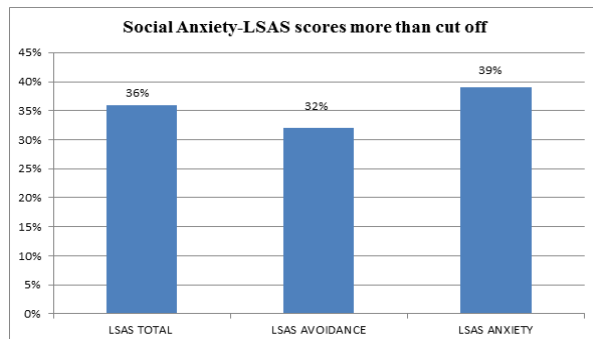
The LSAS was developed by psychiatrist and researcher Dr. Michael R. Liebowitz in 1987. LSAS is a Likert type scale ratings anxiety and avoidance experienced by the respondent in the past week for each of the 24 items. Thirteen of the items enquire about performance situations (e.g. giving a report to a group, eating in public places) while the remaining 11 items assess social interactions (e.g. going to a party, meeting strangers). Scale measures anxiety and avoidance that appear in all these 24 situations. It is composed of 2 subscales: first subscale measures anxiety in these situations and second subscale measures the avoidance behaviour. Subscale score ranges from 0 to 72 and total scale score ranges from 0 to 144. The recommended cut-off point for each subscale is score of 25 and for total score is 50 points. 55-65 moderate, 65-80 marked, 80-95 severe, >95 - very severe social phobia.

Scale has an excellent internal consistency and reliability with Cronbach's alpha for the subscales ranged from 0.82 to 0.91 and for the LSAS total score 0.96. (4) It has very good validity and the items had strong correlation with the other social anxiety measures.(5) There are no norms available for Indian population. For this study, LSAS was translated in Hindi by using the method of back translation to ensure equivalence of meanings and to include non-English speaking subjects. (6)

5) SPSS 17.0 Software: Using this software, the statistical tests of Frequency, Chi-Square tests, Post-hoc (Standardised Residual) Chi-square test, Fisher's exact test were applied to the data.

Results:

A total of 100 patients with acne in age range 15-30 years participated in the study.

Graph 1 Social anxiety level in acne patients

As seen in graph 1 above, of the 100 patients studied 36 had social phobia. 39% and 32% of the acne patients had social anxiety and social avoidance respectively.

Table 1 below shows that amongst acne patients having social anxiety majority had acne lesions localised on face (36.7%), almost all had clinically very severe (100%) acne and none of them subjectively perceived their acne lesions as mild. However, these clinical variables of acne had statistically non significant impact on presence of social anxiety.

Table 1 Impact of clinical variables of acne on social anxiety

Clinical Variables		LSAS more than cut off Social Anxiety		Total	p' value
		Yes n (%)	No n (%)		
Localization	Mostly on Face	33 (36.7%)	57 (63.3%)	90	NS (0.922)
	Mostly on body	2 (28.6%)	5 (71.4%)	7	
	Equally distributed	1 (33.3%)	2 (66.7%)	3	
Clinical Acne Severity by GAGS	Mild(1-18)	12 (41.4%)	17 (58.6%)	29	NS (0.297)
	Moderate (19-30)	16 (29.6%)	38 (70.4%)	54	
	Severe (31-38)	4 (30.8%)	9 (69.2%)	13	
	Very severe (>39)	4 (100.0%)	0 (0.0%)	4	
Subjective Acne Severity	Mild	0 (0.0%)	0 (0.0%)	0	NS (0.943)
	Moderate	11 (35.5%)	20 (64.5%)	31	
	Severe	25 (36.2%)	44 (63.7%)	69	

($p < 0.005^{**}$, $p < 0.05^{*}$; Statistical test: Chi-Square test, Fisher's Exact Test; GAGS – Global Acne Grading System)

Discussion:

This was a cross sectional study in which 100 consecutive patients newly diagnosed with acne presenting to dermatology OPD in age group of 15-30 years were assessed for social anxiety after exclusion of other dermatological, medical and pre-existing psychiatric disease. When the importance of body image and resultant cosmetic problems is considered in combination, it will definitely have impact on level of social anxiety in acne patients. Similar to our findings, a study done by Yarpuz AY et al using LSAS, reported that 25.6%, 32.9%, 27.7% of the acne patients scored above the cut-off point of LSAS total scores, LSAS-Anxiety and LSAS-Avoidance subscale respectively.(7) High level of social anxiety in acne patients could be because occurrence of acne is at peak when teenagers are learning to form relationships. Therefore those with acne may lack the self-confidence to go out with friends and make these bonds. The main concern can be fear of negative appraisal, feeling of shame and social uneasiness that they would be judged as unattractive by others can lead to social anxiety and social avoidance and in extreme cases social phobia can develop. In a survey conducted by Ritvo E et al, by interviewing teens they found that most of the teen respondents who had ever had acne; would stay off facebook for a year (59%) or not go on a date for a year (30%).(8)

When acne localizes primarily on the face, it has a greater effect on psychological functioning. When it is on the back or the chest, it can be covered with clothing, it causes less distress. A study by Korczak et al, found that frequent recurrence can result in disappointment of acne sufferer especially when lesions are on face and therefore can experience anxiety. (9) Even though, we found statistically no significant difference between 3 localization group (face, body and equal distribution); amongst patients with acne having social anxiety

majority had acne lesions on face.

A study by Gupta et al reported that the patients with mild-moderate acne severity experience stress and had social anxiety; and concluded that for acne to lead to psychological problems it need not be severe. (10) This is in contrast to findings of our study, in which acne patients having social anxiety had clinically very severe (100%) acne and subjectively perceived their acne as severe. In another study it was reported that patients evaluate the severity level of acne, especially when localized on the face, higher than clinicians.(11)

Conclusions

In the present study out of 100 consecutive patients of acne vulgaris presenting to dermatology OPD, 36% had social anxiety. In majority of the acne patients having social anxiety acne are localised on face. Patients with clinically and subjectively perceived severe acne had social anxiety. Although a clinician's evaluation is objective and more precise and valuable, the self-perception of a patient has a greater affect on his/her psychological condition.

Implications

As a result, acne vulgaris is an illness with the potential to cause important psychological and psychiatric complications and to negatively affect quality of life. The deleterious psychosocial effects of acne due to social anxiety can be reduction in employment opportunities.

Thus, collaborative work of psychiatrist and dermatologist for psychiatric evaluation, psychological support in the form of use of psychiatric medications if needed and psychological therapies should be a part of the acne treatment plan.

Limitations of the study are

- Absence of control group,
- Lack of longitudinal follow up of the study sample

References

- 1) Koblenzer CS. Psychosomatic concepts in dermatology. Arch Dermatol 1983; 119:501-512
- 2) Doshi A, Zaheer A, Stiller MJ. A comparison of current acne grading systems and proposal of a novel system. Int J Dermatol 1997; 36: 416-418.
- 3) Liebowitz M. R. Social phobia. Mod Prob Pharmacopsychiatry 1987; 22:141-173.
- 4) Heimberg, RG, Horner KJ, Juster HR, Safren SA, Brown EJ, Liebowitz MR et al. Psychometric properties of the Liebowitz Social Anxiety Scale. Psychol Medicine 1999; 29: 199-212.
- 5) Fresco DM, Coles M E, Heimberg RG, Leibowitz MR, Hami S, Stein MB et al. The Liebowitz Social Anxiety Scale: A comparison of the psychometric properties of self-report and clinician-administered formats. Psychol Medicine 2001; 31: 1025-1035.
- 6) Brisling RW. Translation and content analysis of oral and written materials. In: Triandis HC, Berry HW, editors. Handbook of Cross-Cultural psychology. Boston: Allyn and Bacon, 1980.p.389-444.
- 7) Yarpuz AY, Saadet ED, Sanli HE, Ozguven DH. Social anxiety level in acne vulgaris patients and its relationship to clinical variables. Turk Psikiyatri Dergisi 2008; 19: 29-37.
- 8) Ritvo E, Rosso JQD, Stillman MA, Riche CL. Psychosocial judgements and perceptions of adolescents with acne vulgaris: A blinded, controlled comparison of adult and peer evaluations. Bio Psycho Soc Med 2011; 5:11.
- 9) Korczak D. The psychological status of acne patients. Personality structure and physician-patient relations. Fortschr Med. 1989; 107:309-13.
- 10) Gupta MA, Gupta AK, Schork NJ. Psychiatric aspects of the treatment of mild to moderate facial acne. Int J Dermatol 1990; 29:719-721.
- 11) Kellet SC, Gawkröger DJ. The psychological and emotional impact of acne and the effect of treatment with isotretinoin. Brit J Dermatol 1999; 140: 272-282.