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Original Research Article

Impact on quality of life in acne patients attending the tertiary care center in Saurashtra region of Gujarat

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ABSTRACT

Background: Acne vulgaris is a common chronic skin disorder that is defined by inflammation of the pilosebaceous units and has a variety of symptoms and treatment options. Acne is very prevalent among teenagers, and it can linger far into adulthood. In this study, the dermatological life quality index was assessed in acne vulgaris patients.
Methods: This is a hospital based prospective cross-sectional questionnaire study done on acne vulgaris patients attending the dermatology outpatient department in a tertiary care hospital in Saurashtra region, Gujarat. Quality of life (QoL) was measured using both acne specific (Cardiff acne disability index (CADI)) questionnaire and skin disease specific (Dermatology life quality index (DLQI)) questionnaire.
Results: In our study, women outweighed men (M:F ratio=1:1.43). Those between the ages of 15 and 20 were the most affected. The average DLQI score was 5.5947. The vast majority had a 'minor impact' on QoL. Females had a lower QoL than males. In general, grade 2 acne was the most common kind of acne. Males were more likely to have grade 3 acne. The majority of the patients (84%) experienced embrassement or heightened self-consciousness as a result of their acne.
Conclusions: Our research reveals that acne has a detrimental influence on QoL, demonstrating the need for a comprehensive approach to treating the body and mind for overall well-being.

Keywords: Acne vulgaris, Dermatology life quality index, QoL

INTRODUCTION

Acne vulgaris is one of the most frequent skin illnesses that dermatologists are called upon to treat. It primarily affects teenagers, but it can afflict anybody at any age. Acne is a complex chronic inflammatory illness of the pilosebaceous units, according to the definition. Seborrhoea, comedones, erythematous papules and pustules, less commonly nodules, deep pustules or pseudocysts, and scarring are some of the clinical manifestations. Increased sebum production, follicular hyperkeratinization, propionibacterium acne (P. acne) colonisation, and inflammatory products are the four basic pathogenetic mechanisms of acne.

Acne is thought to afflict 9.4% of the global population, making it the eighth most common ailment on the planet. Acne is most common in postpubescent adolescents, with males being the most afflicted, especially with more severe types of the condition, according to epidemiological research.[2]

Acne, as a very noticeable skin problem, disrupts the lives of adolescents who are going through a variety of changes: physical, intellectual, and emotional. While it is generally known that acne may cause depression and low self-esteem, the sociological evolution of teenagers in the twenty-first century is likely to exacerbate this effect. Understanding the codes of today's teenagers (who are more worried about their looks than earlier generations at

the same age) helps us to improve our medical approach to acne and improve treatment compliance and adherence.[3]

METHODS

A cross-sectional study comprising 100 people diagnosed with acne vulgaris of age greater than 15 and above.

All patients who visited the skin outpatient department at a tertiary care hospital in the Saurashtra district of Gujarat were included in the research. The data was analysed using the consecutive sampling method and descriptive statistics. Patients under the age of 12 and those who refused to participate in the research were excluded. Patients aged 12 and up were given a signed informed consent form.

Those who volunteered to take part in the study had their medical histories taken and underwent a complete clinical evaluation to determine the severity of their acne lesions.

Acne was graded and separated depending on clinical criteria into four severity levels, using a simple grading system as follows:[4] Grade 1-comedones, occasional papules, grade 2-papules, comedones, few pustules, grade 3-predominant pustules, nodules, abscesses, grade 4-mainly cysts, abscesses, widespread scarring.

Patients were divided based on grade of acne scar, post inflammatory pigmentation, duration of acne and demographic data.

After that, patients were asked to complete a DLQI questionnaire. The DLQI questionnaire is intended for adults, or those who are over the age of 16. It comprises ten questions, each with four alternative answers for a maximum of three points and a total maximum score of 30 and a minimum score of 0. The greater the score, the worsening of one's QoL. The DLQI may alternatively be stated as a percentage of a maximum potential score of 30, which is 30. The DLQI is a six-part descriptive questionnaire for adults that examines symptoms and feelings, daily activities, leisure, job and school, personal relationships, and therapy. It may be graded on a scale of 0 to 30. The DLQI has a very high success rate for accurate completion.

The questionnaire is not scored if two or more questions are left unanswered. If more than one response option is selected, the response option with the highest score should be recorded. If two tick boxes have the same response, the lesser of the two score alternatives should be reported. Calculating the score for each of the DLQI's six sub-scales can be used to examine it (see above). When employing sub-scales, if a sub-response scales to one question is absent, the sub-scale should not be scored. The DLQI values are interpreted clinically using a banding method (consisting of 5 bands).

The clinical interpretation of the DLQI scores uses a banding system (consisting of 5 bands). According to this system, a DLQI score 0-1=no effect at all on patient's life, DLQI score of 2-5=small effect on patient's life, DLQI score of 6-10=moderate effect on patient's life, DLQI score of 11-20=very large effect on patient's life, DLQI score of 21-30=extremely large effect on patient's life.[5]

The disability caused by acne was assessed by Cardiff acne disability index (CADI). Total score for all the five questions ranges from 0-15 (score for each question 0-3). They were categorized as no impairment from acne (CADI 0), mild impairment (CADI 1-5), moderate impairment (CADI 6-10) and severe impairment (CADI 11-15).[6]

RESULTS

Out of 100 patients of acne vulgaris, 59 (59%) patients were females and 41 (41%) patients were males with female predominance. Majority patients belonged to the 20 to 30 years with the number being 55 (55%), followed by 39 (39%) in the age group less than 20 years and 6 (6%) in the age group more than 30 years. Eighty patients were unmarried. Maximum patients in our study had symptoms for 7-12 months 48 (48%), followed by 0-6 months 20 (20%) then 13-24 months 12 (12%) (in Table 1).

Table 1: Demographic data of patients with acne vulgaris.

Variables	No. of patients
Sex	
Males	41
Females	59
Age (years)	
<20	39
20-30	55
>30	6
Marital status	
Unmarried	80
Married	20
Duration of acne (Months)	
0-6	20
7-12	48
13-24	12
25-36	0

Grade II acne was seen in majority of patients 57 (57%) followed by grade III 27 (27%) and grade I 15 (15%). Minimum numbers were found in grade IV i.e., 1 (1%) (Figure 1). Acne scars were absent in 24 (24%) patients. Mild scars in patients 27 (27%) followed by moderate scars were seen in 18 (18%) and severe in 11 (11%) (Figure 2). The 87 (87%) patients showed post acne hyper-pigmentation/erythema while 13 (13%) patients had no hyper-pigmentation/erythema (Figure 3).

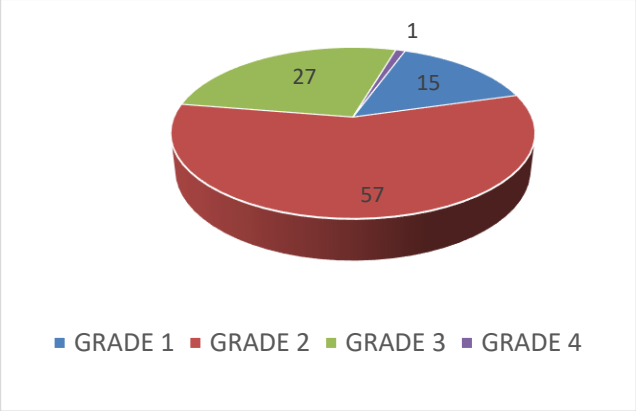

Figure 1: Grading of acne in patients with acne vulgaris.

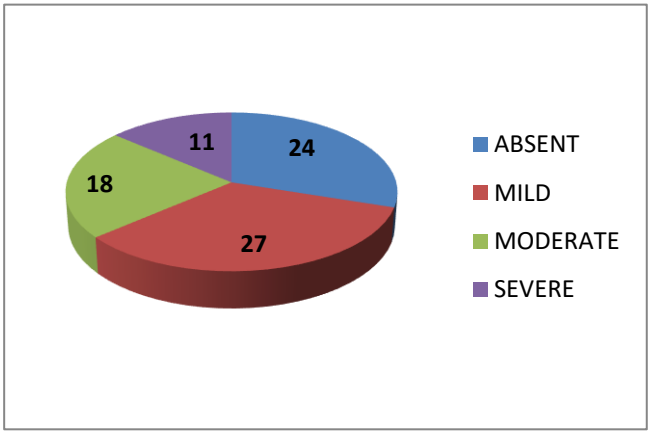

Figure 2: Grading of acne scar in patients with acne vulgaris.

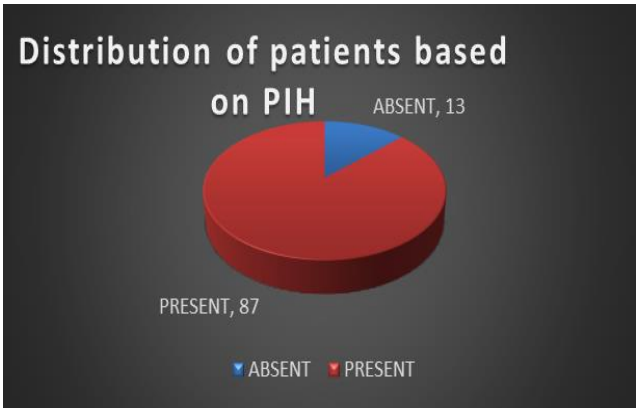

Figure 3: Post acne hyperpigmentation in patients with acne vulgaris.

According to DLQI scores of acnes showed no effect in 5% of the patients, small effect in 22% of the patients, moderate effect in 31% of patients, very large effect in 35% of patients and extremely large effects on 7% of patients. Females are had poor QoL than males (Figure 4).

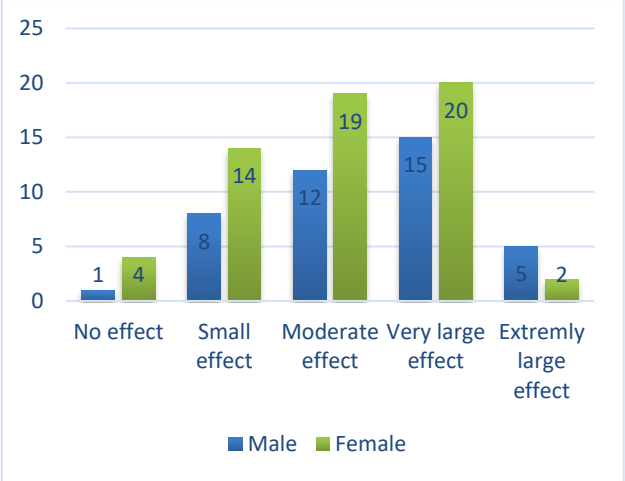

Figure 4: Impact of acne on QOL based on DLQI in both sexes.

Mean DLQI was increasing with grade of acne. Mean DLQI was highest among the grade 4 acne (18%) followed by grade 3 (10.78%), grade 2 (9.96%) and grade 1 (6.4%) (Table 2).

Table 2: Grade of acne and mean DLQI score.

Grade of acne	Frequency (No. of patients)	Mean DLQI
1	15	6.4
2	57	9.96
3	27	10.78
4	1	18

Mean CADI was 7.89 and it was highest among married 8.8 where in unmarried it was 7.89. There was no impact of CADI due to gender difference. CADI was showing increasing trends with increased in severity of acne grade (Table 3).

Table 3: CADI based on grade of acne.

Grades	Mild	Moderate	Severe
1	6	6	3
2	18	27	12
3	3	17	7
4	0	0	1
Total	27	50	23

DISCUSSION

Using the DLQI and CADI scoring systems, we attempted to assess the impact of acne on QoL, as well as its impacts on self-esteem, mood, and psychiatric illnesses in patients older than 12 years of age from the Saurashtra area.

Females outnumbered men in our research (M: F ratio 1: 1.43), which matches another study by Hazarika et al (1: 1.22).[7]

In our study, the highest prevalence observed was grade 2 acne (57%) which is similar to Hazarika et al (67.5%). Based on site, Face was the commonest site involving 99% of the study population which is in accordance with Durai and Nair et al (99.3%).[8] Samanthula and Kodali et al found that 60.4% had acne for more than 1 year duration while in our study it was 60% in patients with duration 6 months to 1 year.[9]

The largest clustering of cases was identified in the same study between the ages of 15-20 years, whereas clustering was seen in our study between the ages of 20-30 years.

The study by Hazarika et al found that mean DLQI scores increased with age, which was consistent with our findings.

With the severity of acne, the mean DLQI increased. Grade 4 Acne had the highest mean DLQI (18%), followed by grade 3 (10.78%), grade 2 (9.96%), and grade 1 (9.96%) (6.4%).

CADI scores in acne patients were analysed by Shahin et al, who found a mean CADI score of 7.57, whereas it was 7.89 in this study.[10] According to Salek et al and Clark et al the majority of patients (78%) had moderately severe acne, and the grade corresponded with the CADI score.[11,12] There were no gender variations in the scores, which were higher in those with facial acne (7.9) and married people (8.8).

The term "QoL" can refer to a multifaceted notion that encompasses a person's subjective physical, psychological, emotional, mental, social, and spiritual well-being. Facial acne primarily affects young individuals and has a negative influence on their QoL. Even moderate acne, with or without scarring, and/or post-acne pigmentation/erythema, can result in psychosocial morbidity, according to our findings. Young acne sufferers have expressed feelings of embarrassment and frustration, which can lead to anxiety and despair. As a result, assessing QoL in acne patients should be addressed in conjunction with early acne treatment to avoid disease progression and enhance patients' QoL by lowering illness-related psychosocial consequences.

CONCLUSION

In conclusion, the psychological impact of acne must be reconsidered in light of the standards that 21st-century teenagers live by. This generation, more than any other, pushes us to reconsider child-adult connections, particularly teen-doctor ones; they have grown up in a beautiful but difficult world that values beauty. Most dermatologists have intuitively adapted to a generation that can be impatient, demanding, egocentric, and connected at times, but a deeper understanding of these adolescents' motivations and the factors affecting their psychological well-being will help to improve treatment adherence and success.

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