



DLQI IN ACNE VULGARIS

Dermatology

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ABSTRACT

Introduction: Acne vulgaris is a chronic inflammatory disease of the pilo-sebaceous unit characterized by seborrhoea, open and closed comedones, papules, pustules, and in more severe cases, nodules and pseudocysts. It is the most common dermatological condition encountered in adolescents. Scarring and psychosocial distress are debilitating complications which persists long after active lesions have disappeared. **Aim:** To study the Dermatology Life Quality Index (DLQI) of patients with acne vulgaris attending Dermatology OPD at Saveetha Medical College. **Methodology:** Seventy-five patients having clinical history of acne vulgaris attending Dermatology OPD at Saveetha Medical College & Hospital was included in our study. Clinical details regarding age, sex, site of lesion, grading of acne, complications and quality of life was obtained and a detailed dermatological examination was done in all these patients. An informed consent was obtained from the included patients. All findings were recorded on specialized designed proforma. **Result:** In our study out of seventy-five patients with acne vulgaris, 16 were males and 59 were females. The most common age group affected were 21-25 years (46%) of age. Acne scars occurred in 42 (56%) patients. Almost ninety percentage of patients had moderate to severe impact on quality of life. **Conclusion:** Acne vulgaris is the most common dermatological condition which can cause significant impairment in the quality of life of the patients. Proper treatment of acne vulgaris along with appropriate counselling of the patients will help in improving the quality of life of the patients.

KEYWORDS

Acne vulgaris, DLQI, Quality of life

INTRODUCTION:

Acne vulgaris is a chronic inflammatory disease of the pilo-sebaceous unit characterized by seborrhoea, open and closed comedones, papules, pustules, and in more severe cases, nodules and pseudocysts [1]. It is the most common dermatological condition encountered in adolescents [2]. More than 85% of adolescents suffer from acne and in 50% cases, it extends into adulthood [3]. Acne commonly involves the face, although it can also affect the upper chest and upper back of the body. Facial appearance is an important aspect of one's perception of body image. Hence a susceptible individual with facial acne may develop a significant psychosocial disability [4]. Adolescence is a period in which individuals feel the need to appear their best and the presence of acne can make them feel their worst. The major complications of acne are scarring and psychosocial distress which persists long after active lesions have disappeared.[5]

Psychosocial effect of acne vulgaris have been long identified, but these sequelae of acne remain under evaluated. Patients with acne have been shown to have levels of social, psychological, and emotional impairments similar to serious diseases such as asthma, epilepsy, diabetes, or arthritis [6]. These patients are more prone to embarrassment, social withdrawal, depression, anxiety, and anger [7]. Evaluation of acne using only clinical assessment does not capture the impact of the disease adequately. Assessment of impact on health-related quality of life (QoL) is needed to fully characterize the overall disease burden and effectiveness of treatment [8].

The objective of this study is to assess the impact of acne and its sequelae by evaluating the quality-of-life index which in turn will help to design better interventions to improve the quality of life of the patients.

MATERIALS AND METHODS:

Type of study:

Cross-sectional, pre structured questionnaire-based study conducted between January to March 2020 in the Department of Dermatology of Saveetha Medical College.

Sample size:

This study includes a total of 75 patients who presented to the Dermatology Department of Saveetha Medical College with the complaints of acne vulgaris.

Selection criteria:

Patients above 15 years of age with a clinical diagnosis of acne vulgaris were included in the study after obtaining informed written consent. Patients suffering from any medical disorders or those on topical and

systemic drugs which are known to predispose the individual to acne or likely to interfere with assessment of acne and patients who are not willing to participate in the study were excluded from this study.

Data collection procedures:

A detailed history was obtained from the patients who visited the outpatient Department of Dermatology with the complaints of acne vulgaris. Details regarding the site and duration of acne, personal history, factors aggravating acne, presence of medical and surgical diseases, family history and treatment history were elicited. Further, cutaneous examination was done by the dermatologist on all the patients and the following details were noted:

- (i) Type of skin (dry/normal/oily)
- (ii) Site of lesion (face, chest, or back)
- (iii) Grade of acne
- (iv) Post-acne hyperpigmentation (present/absent)
- (v) Acne scars.

The DLQI questionnaire was used as the study material. DLQI is a validated questionnaire which grades the Quality of Life of an individual with acne vulgaris by assessing the following domains:

- Symptoms and feelings (questions 1 and 2)
- Daily routine activities (questions 3 and 4)
- Leisure and spare time (questions 5 and 6)
- Individual relations (questions 8 and 9)
- Occupation and school (question 7), and treatment (question 10) [9].

Each question is scored as,

- Very much- score 3
- A lot- score 2
- A little- score 1
- Not at all- score 0.

Final DLQI (Dermatology Life quality Index) score is the sum of all the scores, which can range from 0–30. High scores indicate poor quality of life.

DLQI score interpretation is done as follows:

- 0–1 (No effect on patient's life)
- 2–5 (Small effect on patient's life)
- 6–10 (Moderate effect on patient's life)
- 11–20 (Very large effect on patient's life)
- 21–30 (Extremely large effect on patient's life).

After detailed history taking and examination the patients were asked

to fill the DLQI questionnaire without any assistance. A formal informed written consent was also obtained. The scope of the study was also explained to the patients.

OBSERVATION AND RESULTS:

Out of 75 patients who attended the dermatology outpatient at Department of Saveetha Medical College during the months January to March, 16 (21%) were males and 59 (78.6%) were females. All the 75 patients were divided into 3 different age groups as: 15-20, 21-25, and >25 years of age. Majority of the individuals were in the age group of 21-25 (46%) followed by 15-20 years of age (45.3%) and >25 years of age (6.6%). Of these majority of the males presenting with acne vulgaris were between 21-25 years of age but the female population presenting with the complaints of acne vulgaris were equally found between both 15-20 and 21-25 age groups. The mean age of the study population was 21.13.

Facial acne was the most common (72%), followed by the involvement of face, chest and back together (12%). Men predominantly presented with the involvement of face, chest and back together and females predominantly presented with facial acne.

Duration of acne was >24 months in most cases (48%). Majority of the individuals had oily skin (51%) followed by patients with normal skin (40%).

Grade 2 acne was found commonly among these patients (65.3%) followed by grade 3 (13.3%), grade 1 (12%) and grade 4 (9.3%).

Acne scars were seen in 56% of the cases. Among those with acne scars majority of the individuals had severe acne. Post acne hyperpigmentation was noted in 62.7% of the cases.

Majority of the patients (46.7%) had a DLQI score between 11-20 which means, acne has a very large effect on their lives. This was followed by 40% of the population having a DLQI score between 6-10 with acne having a moderate effect on their lives. Majority of the men with acne were found to have a very large effect on their lives. The female study population almost fell equally between the two groups: [DLQI score between 6-10 and 11-20].

Table 1: Observations Of The Study

	No. of patients	
	Male	Female
Gender	16	59
Age (in years)		
15-20	6	28
21-25	9	27
>25	1	4
Duration of acne (in months)		
0-6 months	1	4
7-12 months	3	4
13-24 months	3	24
>24 months	9	27
Site of acne		
Face	5	49
Back	0	1
Face and chest	1	5
Face and back		2
Chest and back	2	0
Face, chest and back	7	2
Grade of acne		
I	1	8
II	9	40
III	4	6
IV	2	5
Acne scar		
Mild	3	7
Moderate	3	12
Severe	5	12
Absent	5	28
Post acne hyperpigmentation		
Present	11	36
Absent	5	3

Table 2: Dlqi Score

SCORE RANGE	EFFECT	NO. OF MALES	NO. OF FEMALES	TOTAL % OF PATIENTS
0-1	NO EFFECT	0	1	1.3%
2-5	SMALL EFFECT	1	6	9.3%
6-10	MODERATE EFFECT	3	27	40%
11-20	VERY LARGE EFFECT	11	24	46.7%
21-30	EXTREMELY LARGE EFFECT	1	1	2.7%

DISCUSSION:

Skin diseases have known to cause significant impairment in the health and social well-being of an individual. It can also severely impair the self-image of an individual which can induce stress and affect the mental health and quality of life of an individual. Acne vulgaris can affect the patients both physically and emotionally and can also induce anxiety and depression which will in turn significantly affect the quality of life of an individual.

Our study has a female population of 78.6%, whereas Hazarika N et al [10] reported a female population of only 57%. Also, no gender difference in DLQI scores was noted in this study, which correlated with the study done by Durai and Nair [11] and also with Hazarika N et al [10]. This indicates that both genders were concerned about their appearance.

In the study conducted by Samantha and Kodali [12], 60.04% of the cases had acne for more than 1 year whereas, in our study 48% of the study population reported with acne for more than 24 months. Facial acne was most commonly reported in our study accounting for about 72% of the cases which also correlates with the study of Hazarika N et al [10] who also observed facial acne to be common in most of the cases (61.4%).

About 65.3% of the cases in our study presented with grade 2 acne, which correlates with the study conducted by Hazarika N et al [10] who encountered about 67.5% of the cases with grade 2 acne. Hayashi et al [13] observed acne scars in 90.8% of the cases, whereas in our study 56% of the patients presented with acne scars. Post acne hyperpigmentation was seen in about 62.7% of the population. Hazarika N, et al [10] reported 75.4% of the cases with post acne hyperpigmentation.

In the study conducted by Hazarika N, et al [10], 61.4% had oily skin. In our study 51% of the cases had oily skin showing that majority of the individuals with acne had oily skin. The mean DLQI score in our study is 10.72 which is higher compared to the study conducted by Hazarika N, et al [10] who had a mean DLQI score of 7.22.

CONCLUSION:

This study which was conducted to assess the quality of life of patients with acne vulgaris showed a significant impairment in the quality of life of these patients. Worsening quality of life was observed with increase in age and duration of acne, facial acne and presence of acne scars. Therefore, appropriate usage of the DLQI questionnaire on patients with acne vulgaris will help in the early assessment of the quality of life of the patients which in turn will reduce the psychological effect it creates among the patients with acne vulgaris. Thus, proper treatment of acne vulgaris along with appropriate counselling of the patients will help in improving the quality of life of the patients.

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