

Impact On The Quality Of Life Among Acne Patients Attending A Tertiary Care Hospital In The Southwestern Part (Saurashtra Region) Of Gujarat

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Abstract: Background: Acne vulgaris is a common, chronic disorder resulting from the inflammation of pilosebaceous unit, present with clinically various forms. It is usually prevalent in adolescent may persist in adulthood. This study was conducted to evaluate the quality of life (QoL) in patients suffering from the acne vulgaris. Material And Methods: Hospital based cross sectional study was conducted in 100 patients attending outpatient department of dermatology at a tertiary care hospital in south western part (Saurashtra region) of Gujrat. Dermatology life quality index (DLQI) questionnaire was used to observe the effect of acne among patients. Result And Conclusion: Total numbers of patients enrolled were 100(71 females.29 males). Maximum patients were of the age group 21-30 years with the 52(52%) individuals, followed by 25 (25%) in the age group older than 31 years, and 23 (23%) in the age group younger than 20 years. In general, grade 2 acne was the most common kind of acne. The vast majority had a “very large effect” on QoL. [Purohit M Natl J Integr Res Med, 2024; 15(1): 50-53, Published on Dated: 26/01/2024]

Key Words: Acne Vulgaris, Dermatology Life Quality Index, QoL, Clinical Severity

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Introduction: Acne Vulgaris is the commonest skin condition affecting more than 80% of individuals at some stage of their life^{1,2}. In many patients, rather than being a self-limiting condition of adolescence, acne Vulgaris acquires all the characteristics of a chronic disorder as defined by the world health organization, viz a prolonged course, a pattern of recurrence or relapse, manifesting as acute outbreaks or slow onset, and a psychological and social impact on the individual's quality of life³. Acne vulgaris is a complex chronic inflammatory illness of the pilosebaceous units, according to the definition.

Comedones, erythematous papules and pustules, less commonly nodules, deep pustules or pseudocyst, and scarring are some of the clinical manifestations. Increased sebum production, follicular hyperkeratinisation, Propionibacterium acne (p. acne) colonisation, and inflammatory products are the four pathogenetic mechanism of acne.

The sociological evolution of teenagers in the twenty-first century is likely to exacerbate the impact of acne on depression and low self-esteem, as it disrupts their lives during a period of significant physical, intellectual, and emotional changes. Understanding the codes of today's teenagers, who prioritize their appearance more

than previous generations did at the same age, enables us to enhance our medical approach to acne and promote better treatment compliance and adherence.

Material & Methods: A cross-sectional study comprising 100 people diagnosed with acne Vulgaris of age greater than 16 and above. All patients who visited the skin outpatient department at a tertiary care hospital in south western part (Saurashtra region) of Gujrat were included in study. Patients under the age of 16 and those who refused to participate in the research were excluded. Patients aged 16 and up were given a signed informed consent form.

The participant who volunteered for the study underwent thorough medical history assessment and complete clinical evaluations to ascertain 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 follows⁴: 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 categorized according to the grade of acne scarring, duration of inflammatory pigmentation,

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acne duration, and demographic data. The DLQI questionnaire, designed for adults aged 16 and above, consists of ten questions, each offering four answer options with a maximum score of three points per question, totalling a maximum of 30 points and a minimum of 0. A higher score indicates deterioration in quality of life.

Alternatively, the DLQI score can be expressed as a percentage of the maximum potential score (30). This six-part questionnaire evaluates symptoms, daily activities, leisure, work or school, personal relationships, and therapy, graded on scale of 0 to 30, and is highly effective in accurately assessing respondents.

The questionnaire must not be scored if two or more questions are left unanswered. In cases where multiple response options are selected, only the options with highest score should be recorded; if two boxes yield the same response, the lower score should be reported.

Sub -scales can be utilized to assess each of the DLOI'S six domains, but if a response scale for specific question is missing, the corresponding sub -scale should not be scored. DLQI values are clinically interpreted using a banding method, which consist of five 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 life⁵.

Results: Out of 100 patients of acne vulgaris, 71 (71%) patients were females and 29 (29%) were, indicating a female predominance.

The Majority patients belonged to the 21-to-30-year age group, with the 52(52%) individuals, followed by 25 (25%) in the age group older than 31 years, and 23 (23%) in the age group younger than 20 years.

Eighty-two patients were unmarried. The Maximum number of patients in our study had symptoms for 7-12 months 58 (58%), followed by 13-24months (22%), 0-6 months 12 (18%) and 25-36(2%) months.

In the majority of patients (62%), Grade 2 acne was observed, followed by Grade 3 in 24 (24%) and Grade 4 in 10(10%).

The minimum was found in Grade 1 i.e., 4 (4%). Acne scars were absent in 21(21%) of patients. Mild scars were present in 34(34%) patients, followed by moderate scars in 17(17%), and severe scars in 14(14%).

Post-acne hyperpigmentation/erythema was observed in 79 (79%) patients, while 21 (21%) patients showed no hyperpigmentation/erythema.

Based on DLQI scores, acne has a small effect on 9% of the patients, a moderate effect in 29% of patients, a very large effect in 41%, and an extremely large effect on 21 %.

Females experience poorer quality of life than males. Are had poor QoL than males. The mean DLQI increased with the severity of acne, being highest among grade 4, (23.6%) followed by grades 3 (19.91%), grade 2 (11.88%) and grade 1 (5.5%) (Table2).

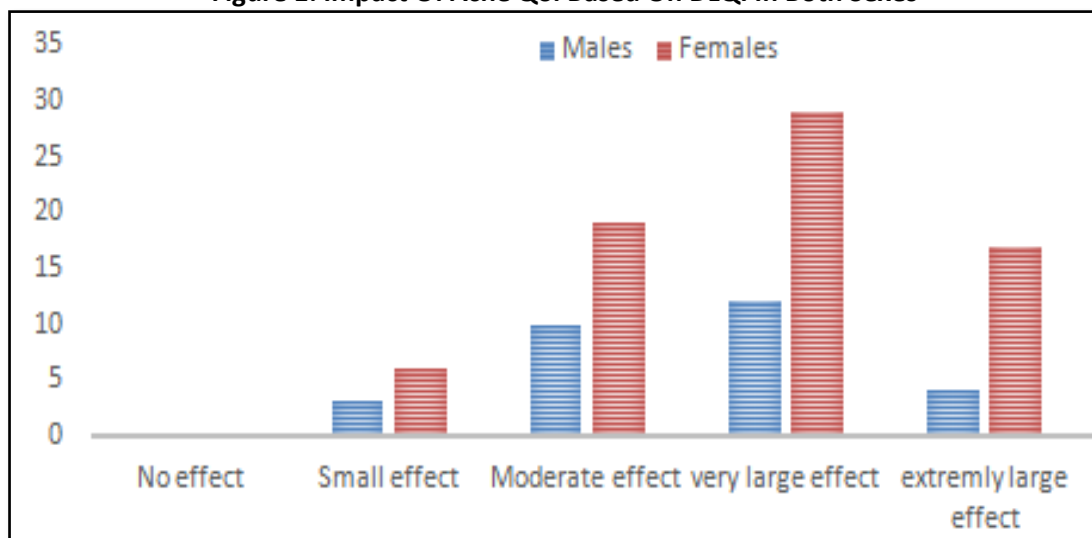
Table: 1 Demographic Data Of Patients With Acne Vulgaris

Variables	No. of Patients
Sex	
Males	29
Females	71
Age (Years)	
<20	23
21-30	52
>31	25
Marital Status	
Married	18
Unmarried	82
Duration Of Acne (Months)	
0-6	18
7-12	58
13-24	22
25-36	2

Table 2: Grade Of Acne And Mean DLQI Score

Grade Of Acne	Frequency (No. Of Patients)	Mean DLQI
1	62	5.5
2	24	11.88
3	10	19.91
4	4	23.6

Figure 1: Impact Of Acne QoL Based On DLQI In Both Sexes



Discussion: Acne Vulgaris is a chronic inflammatory disease with multiple causes, including increased sebum production, follicular hyperkeratization, and the proliferation of *Propionibacterium acnes* within the follicle.

Additionally, alterations in the quality of sebum lipids, regulation of cutaneous steroidogenesis, and androgen activity contribute to its pathogenesis. Interaction with neuropeptides and the exhibition of both pro- and anti-inflammatory properties also play significant roles.

Inflammation, primarily driven by perifollicular T-helper cells through IL-1, is pivotal in the disease's progression⁶. This hospital-based study enrolled 100 cases of acne vulgaris over a span of 3 months. In contrast, Durai et al. included 140 cases over 5 months, and Kulthanan et al. enrolled 110 cases over the course of 1 year^{7,8}.

In this study, female patients outnumbered males (M:F ratio 1:25). Similarly, a female predominance was noted in the study conducted by Hazarika et al^{9,10}. Most patients (62%) in our study had grade 2 acne (predominantly papules), which is consistent with findings in Sivaramakrishnan et al⁹.

Samnthula and Kodali et al. reported that 60.4% of patients had acne for more than 1 year¹¹, whereas in our study, 74% of patients had acne for over a year. The largest clustering of cases in Hazarika et al.'s study occurred between ages 15-20 years, while in our study, clustering was observed between ages 21-30 years.

Patients using topical treatments experienced a small impact on quality of life (QoL), while those on both topical and systemic treatments reported a moderate effect. Patients treated with procedures also reported a small to moderate impact on QoL. The term "QoL" encompasses various aspects of a person's subjective well-being, including physical, psychological, emotional, mental, social, and spiritual dimensions.

Facial acne predominantly affects young individuals and significantly impacts their QoL. Our findings indicate that even moderate acne, with or without scarring and/or post-acne pigmentation/erythema, can lead to psychological distress. Young people with acne often experience embarrassment and frustration, which may contribute to anxiety and despair. Therefore, evaluating QoL in acne patients is crucial alongside early treatment interventions to prevent disease progression and improve patients' well-being by alleviating psychosocial effects associated with the illness.

Conclusion: Our study uncovered substantial impairment of QoL in acne patients. Effective acne treatment should not only address clinical severity but also recognize and address the profound psychosocial impact on patients.

Providing comprehensive counselling and initiating early intervention for acne vulgaris are pivotal in alleviating disease-related psychosocial burdens and optimizing treatment outcomes.

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