

Original Research Article

“Quality of Life in Patients with Acne-A Questionnaire Study”

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Abstract: Introduction: Acne is a chronic disease, involving the face affecting more than 85% of the teenagers, as well as some adults. Though it is considered to be merely a cosmetic problem, it is associated with considerable psychological impairment which is comparable with certain chronic diseases like asthma, epilepsy, diabetes and arthritis. **Objective:** To assess the impact of acne on Quality of Life and acne vulgaris is a chronic disease affecting the face in adolescents and adults. **Material and Methods:** The study sample consisted of 483 consecutive patients with facial acne vulgaris. Patients who had attended the Dermatology OPD, *Medical College for Women & Hospital (MCW&H)*, Uttara, Dhaka, Bangladesh were included in the study. After obtaining the history, the acne was graded into mild, moderate and severe based on the type and number of lesions. Dermatology Life Quality Index (DLQI) and Cardiff Acne Disability Index (CADI) were administered on the patients to measure the Quality of Life. **Results:** Majority (53.2%) of the study population was between 16-20 years and the number of males was more than the number of females. Most of the patients were educated and unmarried. 61.4% of patients belonged to the urban areas & (60.04%) had an acne duration of >1 year. Severe acne was seen in 30.64% of patients and 50.35% had a moderate grade of acne. In 333 patients (68.94%) the CADI scores were >8 showing a clear impact on QOL. Based on the DLQI scores 75.1% of the patients had a moderate to extremely large impairment of QOL. **Conclusion:** Acne has an impact on Quality of Life (QOL) and evaluation of Quality of Life helps in the better management of patients with acne.

Keywords: Acne vulgaris, Quality of Life, DLQI, CADI.

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I. INTRODUCTION

Acne is a chronic disease, involving the face affecting more than 85% of the teenagers, as well as some adults [1]. Though it is considered to be merely a cosmetic problem, it is associated with considerable psychological impairment which is comparable with certain chronic diseases like asthma, epilepsy, diabetes and arthritis [2, 3]. Acne patients are prone to low self-esteem, low confidence and social dysfunction which may lead to anxiety, depression, obsessive compulsiveness and sometimes suicidal ideation [4, 5]. Acne affects the functional abilities of individuals [6] and patients have higher rates of unemployment when compared to those without acne [7]. The majority of the studies on psycho social aspects have been conducted in US and Europe, but the impact of acne on Quality of Life (QOL) is undocumented in India [8-11]. WHO defines QOL as the "individuals' perception of their position in the context of culture and value systems in which they live and in relation to their goals, expectations, standards, and concerns [12]." Measurement of QOL is done with validated and reliable questionnaires like Dermatology Life Quality

Index (DLQI), Acne Disability index (ADI), and Cardiff Acne Disability Index (CADI) [13]. Assessing quality of life can help provide patients with better service, by acknowledging their real needs and interfering with treatment decisions [14]. There are effective therapies for acne and administration of these agents can cause an improvement in quality of life and psychological health [15, 16]. Increased awareness and early intervention for the psychological and psychiatric sequelae of acne can benefit patients. The aim of our study is to assess the impact of acne on Health Related Quality of Life in patients attending in your hospital.

II. MATERIAL AND METHODS

This study has been conducted in the OPD of the Dept. Of Dermatology, *Medical College for Women & Hospital (MCW&H)*, Uttara, Dhaka, Bangladesh. The study sample consisted of 483 consecutive patients with facial acne vulgaris who had attended the Dermatology OPD over a period of 6 months between Januarys to Jun-2020. The subjects with pre-existing psychiatry disorders were excluded. The study was approved by the Institutional Ethics

Committee. A detailed history regarding socio demographic profile, symptoms and clinical aspects was taken after obtaining consent from all the participants of the study. Acne was graded into mild, moderate and severe based on the number, type and severity of lesions [17]. Dermatology Life Quality Index (DLQI) and Cardiff Acne Disability Index (CADI) were administered on the patients to determine the impact of acne vulgaris on Health Related Quality of life (HRQOL). DLQI is a general questionnaire for evaluation of quality of life in dermatology patients and consists of 10 questions about disease symptoms, feelings, daily activities, type of clothing, social or physical activities, exercise, job or education, interpersonal relationships, marriage relationships and treatment. Its domain is from zero (without any effect on quality of life) to 30 (extremely large effect on quality of life). According to the score obtained, the effect of disease on quality of life can be divided into 5 classes which are- without effect, small effect, moderate effect, very large effect and extremely large effect [18]. CADI is a questionnaire which is specific for acne and contains 5 questions-related to the last month- about feelings, interference with social life and interaction with the opposite gender, avoidance of public places, appearance of the skin and perceived severity of disease state. Each question is scored from 0-3 leading to a total score of 0-15. A higher score shows a very large impact on quality of life [19]. In our study a CADI score <8 is considered to have a small effect on quality of life & a score >8 is considered as having a larger effect on QOL.

Both the questionnaires have Persian equivalents with confirmed reliability and validity [20, 21].

III. RESULTS

The results of our study are shown in the table below which shows that majority (53.2%) of the participants belonged to the age group 16-20 years. 53.2% were males and females constituted 46.79% of the study population. Majority of the patients were educated (74.9%) and unmarried (68.3%). Most of the participants (61.4%) were from the urban areas. 290 patients (60.04%) had an acne duration of >1 year. Severe acne was seen in 30.64% of patients and 50.35% had a moderate grade of acne. In 333 patients (68.94%) the CADI scores were >8 showing a clear impact on QOL. Based on the DLQI scores 75.1% of the patients had a moderate to extremely large impairment of QOL.

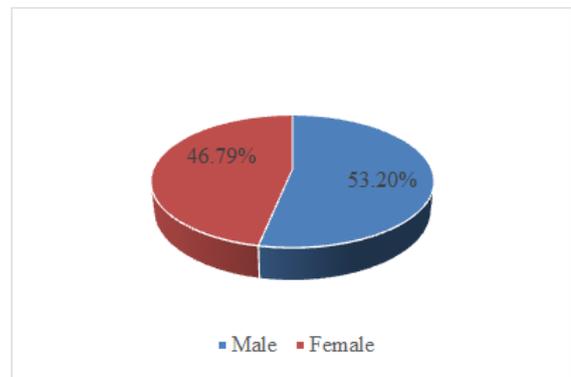


Fig-1: Sex distribution of acne patients

Table-1: Socio Demographic profile, clinical features and quality of life measures in acne patients.

	No. (n=483)	%
Age		
11-15	41	8.488
16-20	257	53.2
21-25	120	24.84
>25	65	13.45
Sex		
Male	257	53.29
Female	226	46.79
Educational Status		
Educated	362	74.94
Uneducated	121	25.05
Socioeconomic status		
Low	68	14.07
Middle	233	48.24
High	182	37.68
Marital status		
Married	153	31.67
Unmarried	330	68.32
Region		
Rural	186	38.5
Urban	297	61.4
Duration		
<1 YR	193	39.95
>1 YR	290	60.04
CADI		
<8	167	34.57
>8	333	68.94

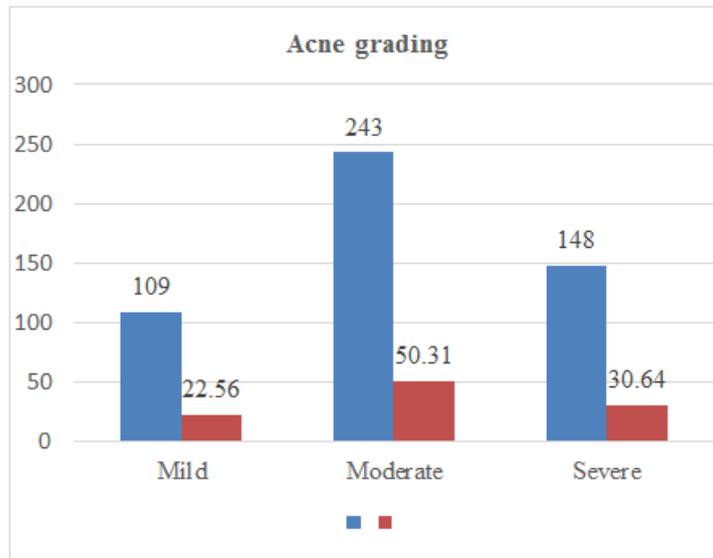


Fig-2: Grading of Acne patients

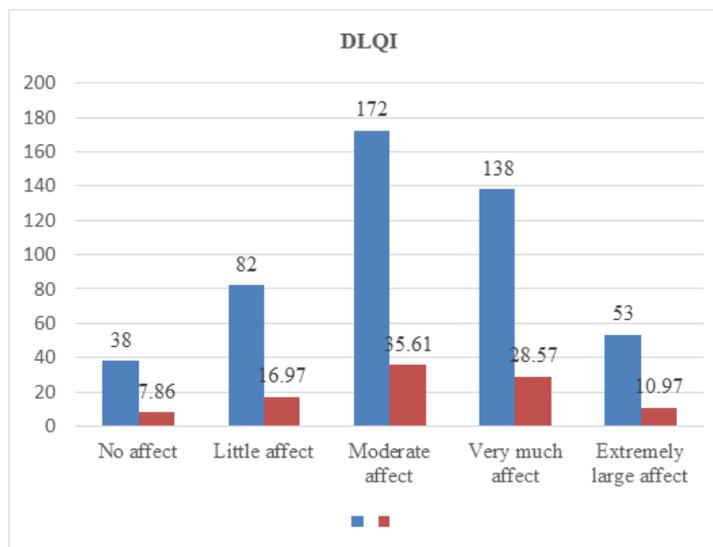


Fig-3: DLQI scores of acne patients

IV. DISCUSSION

The results of our study revealed that majority(53.2%) of the participants belonged to the age group 16- 20 years which is similar to a study by Jancovic *et al.* which showed that acne prevalence is more at the age of 16 and 17 years [22]. According to Balakrishnan *et al.* acne is a chronic disease affecting 85% of the teenagers [1]. In our study the number of males was more than females which is similar to a Chinese study which reported that acne in adolescents was predominant in males and adult acne was common in females [23]. In a study by Kameran Hassan Ismail the majority of the study population was constituted by females, which differs from our study [24]. Our study revealed that there was a clear impact of acne on Quality of Life. It was observed that there was a large impact on QOL in 68.94% based on the CADI score. And as per the DLQI score there was a moderate to extremely large impact on the Quality of Life in 75.1%

of patients. H. Safizadeh *et al.* found that acne influenced the quality of life in 51.8% of the patients based on DLQI score [25] and Hanisha *et al.* reported that based on the specific responses of CADI, 71.1% of the patients felt aggressive, frustrated or embarrassed as a result of having acne [26]. Studies have shown that impairment of Quality of Life in females was more when compared to males which could be due to the fact that adolescent girls are more vulnerable to the negative psychological effects of acne [27-29]. The Quality of Life may also be affected by the severity of acne. Krejci Manwaring *et al.* reported a positive correlation between acne severity and poorer quality of life.³⁰ the majority of our study population consisted of educated and unmarried people belonging to urban areas reflecting that the Quality of Life is affected more in these patients. This could be because of factors like work atmosphere, and pattern of life in cities which make them more concerned about their appearance in

the community. Hence proper counseling and psycho social support should be given to improve the Quality of Life in these patients.

V. CONCLUSION

Evaluation of Quality of Life in patients with acne is important as it helps in the pharmacological as well as psychological treatment of these patients in a more effective and integrated way. Acne has an impact on Quality of Life (QOL) and evaluation of Quality of Life helps in the better management of patients with acne.

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