Ashraf Eman

Scientific supervisor: Senior Lecturer L. A. Poroshina

Educational Establishment
"Gomel State Medical University"
Gomel, Republic of Belarus

IMPACT OF ACNE VULGARIS ON THE QUALITY OF LIFE OF AN INDIVIDUAL

Introduction

Acne vulgaris is one of the most common skin conditions affecting the general population, especially teenagers and young adults. Physiologically, it is an inflammatory pilosebaceous disease consisting of a mixture of open and closed comedones (blackheads and whiteheads), papules, pustules and nodules of varying number and size. A complex interaction between hormones, follicular keratinization, sebum and bacteria determines the severity of acne.

Facial acne vulgaris can have profound effects on health-related quality of life. Evaluation of AV using only clinical objective assessments, such as lesion counts and physician-grading classifications, does not adequately capture the impact of AV from the perspective of the patient. Assessment of impact on HRQL is needed in order to fully characterize the overall disease burden and effectiveness of treatment [1]. WHO defines QoL as the individual's 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 [3]. Although acne vulgaris does not usually compromise general health, consistent studies have demonstrated that it may cause a negative impact on patient's quality of life, with psychological, social wellbeing, and functional abnormalities such as depression, anxiety, anger, low self-esteem, discomfort with self-appearance, embarrassment, self-consciousness, lowered self-concept, social withdrawal, including suicidal ideation, as well as negative influence on school and work performance [2]. Therefore, the assessment of the interaction between acne, emotional issues and psyche is crucial to avoid severe damage. Recent studies have noticed the negative impact of acne on medical students, as well as significant associations between suicidal ideation, mental health problems, social impairment, and adolescents with acne [4].

Goal

The ultimate goal of this study was (i) to determine the overall impact of acne vulgaris on quality of life of people. (ii) to evaluate the relationship between acne severity and disease-specific quality of life in patients with acne. (iii) to assess psychosocial effects of acne among people with acne.

Material and methods of research

The Acne-QoL questionnaire was used as the study instrument for this study. Because acne is a prevalent condition for which subjects often do not seek care, this approach was believed to promote better representativeness given the impracticability of recruiting a population-based random sample. Interested individuals were asked if they would be willing to complete a questionnaire on how acne affected certain aspects of their quality of life. Eligible subjects were 13–39 years of age with facial acne. Male and female subjects (13 to 39 years old) with facial acne (classified into mild, moderate or severe, according to the classification proposed by the American Academy of Dermatology) from any race were enrolled.

The Acne-Specific Quality of Life Questionnaire (Acne-QoL) was developed to measure the impact of facial acne across four dimensions of patient quality of life: self-perception, role-

emotional, role-social, and acne symptoms. Each item identified in the item generation phase was listed in a self-administered questionnaire, which asked subjects to recall their experiences with acne, identify the items that they felt negatively affected their quality of life and to rate their importance on a 5-point scale from "extremely" to "not at all" and responses of "extensive" to "none" are used for symptom-related items. Higher scores for each domain in Acne-QoL reflect increased health related quality of life, i.e. less negative self-perception, social, emotional and symptomatic effects associated with acne. A standard questionnaire and standard keys were used to obtain the results. All statistical analysis of the study was performed using Microsoft Excel and SPSS Statistics version 29.0. As for the evaluation of the degree of association between groups, Pearson's and Spearman's correlation coefficients were used. A probability level lower than 5% (p<0.05) was considered significant.

The results of the research and their discussion

The study population comprised 73 subjects (65.8% female, 34.2% male; mean age 22.5 ± 3.67 years who presented with and without facial acne, as shown in table 1. The most common form of acne vulgaris was mild 50, 71.4%, followed by moderate form 17, 24.3%, and severe form 3, 4.3%. Acne-QoL score was significantly related to the disease grade and it was minimum among those with severe grade, followed by moderate and lastly mild disease grade.

Table 1 – Clinical and demographic characteristics of the study population

Gender		Age						Severity of Acne		
Male	Female	11–15	16–20	21–25	26–30	31–35	36–40	Mild (<10)	Moderate (11–40)	Severe (> 40)
23	48	1	16	46	6	1	1	49	16	3

Association between Acne-QoL domains and grade of acne was statistically significant (P<0.05) with positive relationship between them as seen in table 2. Mean scores for Acne-QoL self-perception and acne symptoms domains were proportional to the level severity of acne in all groups as seen in figure 1. However, a significant difference was observed in the role-social and role-emotional domain, since patients with moderate facial acne presented lower scores than patients with severe acne (p < 0.05) and (p < 0.001).

Table 2 – Descriptive analysis between Acne-QoL domain scores and acne severity according to AAD classification

Domain	Without Acne			Mild			Moderate			Severe			P
	N	Mean	SD	N	Mean	SD	N	Mean	SD	N	Mean	SD	
Self-perception	3	21.66	3.5	50	18.28	5.02	17	11.58	4.09	3	11.33	2.3	.536*
Role-emotional	3	23.33	2.8	50	16.44	5.2	17	10.94	4.1	3	13.00	3.6	.457*
Role-social	3	17.00	2.6	50	14.56	4.3	17	11.23	3.1	3	13.66	2.5	.299**
Acne symptoms	3	20.66	1.5	50	15.16	3.4	17	9.94	2.8	3	8.33	2.08	.649*

AAD – American Academy of Dermatology. *Correlation significant at level of 0.01 level (p<0.001). **Correlation is significant at level of 0.05 level (p=0.01).

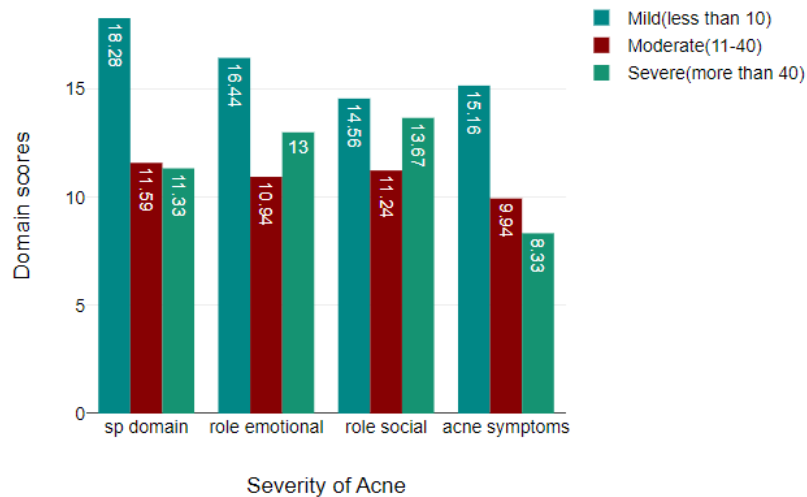*Figure 1 – Relationship between severity of acne and Acne-QoL domains*

Conclusions

Our study showed significant impairment of QoL in acne patients. Acne negatively affects quality of life, and the impact is proportional to the severity of acne. Worsening of QoL was observed with longer duration of disease, increase in severity of acne. More severe acne is associated with greater effect on quality of life with implications for self-esteem, body image and relationships with others. This study thus stresses the importance of assurance and counseling along with early treatment of acne vulgaris in reducing disease-related psychosocial sequelae and enhancing the efficacy of treatment. Therefore, Dermatologists should be encouraged to add Quality of Life evaluations for individuals with acne, since these might reveal individual traits and impairments and help intervene with more individual specific interventions.

LITERATURE

1. *Grekin, S. K. A* Four-question Approach to Determining the Impact of Acne Treatment on Quality of Life / S. K. Grekin, P. Saitta // J Clin Aesthet Dermatol. – 2012. – № 5(3). – P. 51–57.

2. The impact of acne vulgaris on quality of life and psychic health in young adolescents in Greece. Results of a population survey / E. Tasoula [et al.] // An Bras Dermatol. – 2012. – № 87(6). – P. 862–869.

3. *Hazarika, N.* Assessment of Life Quality Index Among Patients with Acne Vulgaris in a Suburban Population / N. Hazarika, R. K. Rajaprabha // Indian J Dermatol. – 2016. – № 61(2) – P. 163–168.

4. Acne-specific quality of life questionnaire (Acne-QoL): translation, cultural adaptation and validation into Brazilian-Portuguese language / C. D. E. S. Kamamoto [et al.] // An Bras Dermatol. – 2014 – № 89(1) – P. 83–90.

УДК: 616-07:575

Yadav Sumit Kumar, Kalimili Sai Hruday Sathvik

Supervisor: Senior Lecturer Paroshyna L. A.

Educational Establishment
"Gomel State Medical University"
Gomel, Republic of Belarus

THE ROLE OF HEREDITARY FACTORS IN THE DEVELOPMENT OF CERTAIN DISEASES

Introduction

Parents, grandparents and children usually share the same health problems. If there is a certain disease that runs in the family. Inherited risk factors are passed down from parent to child by