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ORIGINAL ARTICLE

Evaluation of anxiety, depression, and quality of life in patients with acne vulgaris, and quality of life in their families

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ABSTRACT

Background/Objectives: Dermatological diseases not only affect patients' lives but also the lives of their family members. Our aim was to evaluate anxiety and depression risk in patients with acne vulgaris and the effect of acne vulgaris on quality of life of the patients and their families.
Methods: A total of 125 patients with acne vulgaris, 110 of their family members, and 100 healthy volunteers were included in the study. Patients with acne vulgaris were requested to complete the Acne Quality of Life Scale (AQOL) and Hospital Anxiety and Depression Scale (HAD) at the time of the first admission and 2 months later. The healthy volunteers were only asked to complete the HAD, and the family members filled out the Family Dermatology Life Quality Index (FDLQI) at the time of the first admission and 2 months later.
Results: The acne and control groups showed no significant differences between the HAD anxiety subscale (HAD-A) and HAD depression subscale (HAD-D) scores. The mean AQOL score of the patients was 6.8 ± 5.3. AQOL scores were positively correlated with HAD-A, HAD-D and FDLQI scores. The mean score of the FDLQI was 7.6 ± 5.3. FDLQI scores showed a statistically significant change after 2 months ($p = 0.001$).
Conclusion: Acne vulgaris does not have an effect on quality of life and the risk of anxiety or depression. In the cases of acne, when the quality of life decreases, the risk of depression as well as anxiety increases and the quality of life of the family members is negatively affected. Acne vulgaris negatively affects the quality of life of the family members of the patients.

Introduction

Acne vulgaris, affecting mostly adolescents and young adults, is a chronic inflammatory disease of the pilosebaceous unit. Involving particularly the face, which has a great impact on visual appearance, acne can affect emotional, social, and psychological functions, as well as the patient's quality of life. In this study, the impact on quality of life and the prevalence of anxiety and depression were evaluated by analysis of a number of questionnaires completed by acne vulgaris patients.[1,2]

The close family members of patients with dermatological problems also experience some social, physical, and psychological problems. Therefore, it is prudent to determine and to increase the quality of life of the patients and their family members.[3]

The aim of this study was to evaluate the risk of anxiety and depression in acne vulgaris patients and to determine the impact of the disease on the quality of life of the patients and their close family members.

Materials and methods

A total of 125 patients with acne vulgaris who attended the outpatient clinic of the Department of Dermatology at Okmeydani Education and Research Hospital, Istanbul, Turkey, between August 2013 and May 2014, who had no other dermatologic or psychiatric diseases, and who had no treatment for the previous 6 months, were included in the study, as well as 110 of their family members

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who had no severe systemic, psychiatric, or dermatologic disease (a first-degree relative or spouse). Patients solely having body involvement were excluded. The age, sex, duration of the disease, previous treatments, and acne severity of the patients were recorded. The age, sex, educational status, and monthly income of the family members were also recorded.

To assess the quality of life of the patients, a Turkish version of the Acne Quality of Life Scale (AQOL) was used, and to determine the risk of anxiety and depression, a Turkish version of the Hospital Anxiety and Depression Scale (HAD) was used.[4–7] To evaluate the impact of acne vulgaris on the quality of life of the family members, a Turkish version of the Family Dermatology Life Quality Index (FDLQI) was used.[8,9] The AQOL consists of nine items, all of which are scored on a 4-point scale, with 0 meaning 'not at all' and 3 meaning 'very markedly.' The total score was calculated by summing the scores for each item; higher scores indicated a negative impact on quality of life.[4] The HAD contains 14 items: seven related to anxiety and seven to depression. In the Turkish version of the scale, the cut-off score was found to be 10 for the anxiety subscale (HAD-A) and 7 for the depression subscale (HAD-D).[7] The FDLQI is a dermatology-specific quality of life scale for the family members of patients having any skin disease. It has 10 items, with each item scored from 0 to 3, and higher scores indicate greater impairment of quality of life.[8]

To determine the acne severity, the Global Acne Grading scale was used. The total score was evaluated accordingly: mild (1–18), moderate (19–30), severe (31–38), and very severe (>38). Because patients having a very severe form of the disease were very few in number, they were recruited into the 'severe' group.[10]

Family members were grouped into five categories accordingly: literate, elementary school, middle school, high school, college. They were also grouped according to their monthly incomes into four groups: ≤1000 Turkish Liras, 1001–2000 Turkish Liras, 2001–3000 Turkish Liras, and ≥3001 Turkish Liras.

One hundred age-, sex-, and educationally-matched healthy volunteers (middle–high school students and personnel of the hospital) without a dermatologic or systemic disease were recruited into the control group. Because the AQOL scale is a disease-specific test, healthy volunteers were asked to complete only the HAD. To determine the impact of the therapy on the quality of life of acne patients and their family members, as well as the risk of anxiety and depression of the acne patients, the same questionnaires were applied 2 months later.

The study protocol was approved by the ethics committee of our hospital. Written and signed informed consent was obtained from the family members and the patients or the legal guardians.

For the descriptive analysis of the data, mean, median, standard deviation, minimum–maximum, and frequency values were used. Distribution of the parameters was controlled using the Kolmogorov–Smirnov test. Quantitative values were analyzed using an independent *t* test, Kruskal–Wallis test, and Mann–Whitney *U* test. Qualitative values were analyzed using a chi-square test. A correlation analysis was performed using Spearman's correlation analysis.

Results

Of the 125 patients, 53 were male and 72 were female. The mean age was 18.1 ± 3.3 years (min–max; 14–35 years) and the mean age at disease onset was 14 ± 1.9 years (min–max; 9–22 years). The mean disease duration was 46.06 ± 39.7 months (min–max; 2–294 months). The control group consisted of 39 male and 61 female participants, and the mean age was 18 ± 3.8 years (min–max; 14–30 years). The FDLQI was filled out by 110 subjects (94 female, 16 male), whose mean age was 41.9 ± 8.7 years (min–max; 19–67 years). In total, 85 family members were mothers (77.3%), 13 were fathers (11.8%), 9 were siblings (8.2%), and 3 were spouses (2.7%).

Fifty-nine patients (47.2%) had previously received therapy: 35 (28%) topical therapy; 23 (18.4%) systemic antibiotic and topical therapy; and 1 (0.8%) systemic isotretinoin therapy. The percentage of patients with mild acne was 17.6% ($n = 22$), 56% ($n = 70$) had moderate acne, 25.6% ($n = 32$) had severe acne, and 0.8% ($n = 1$) had very severe acne.

The mean AQOL score of the patients was 6.8 ± 5.3 (min–max; 0–25). There were no statistically significant differences between the control and the patient groups with respect to age, sex, and HAD-A and HAD-D scores ($p > 0.05$); however, according to the cut-off point, HAD-D had a higher patient rate in the control group than in the patient group ($p = 0.021$; Table 1). There were no significant differences between males and females with regard to AQOL, HAD-A, and HAD-D scores ($p > 0.05$).

Where the relationship between AQOL and HAD was concerned, AQOL scores were positively correlated with HAD-A and HAD-D scores ($p < 0.001$, $r = 0.468$; $p < 0.001$, $r = 0.492$, respectively).

No significant relationships were found between age, age at disease onset, disease duration or acne severity, and AQOL, HAD-A, or HAD-D scores ($p > 0.05$). When the patients with acne were grouped according to the cut-off point of HAD-A and HAD-D, we found no differences between scores with regard to severity of acne ($p > 0.05$).

There were no relationships between the previous therapies and AQOL, HAD-A or HAD-D scores ($p > 0.05$).

Two months later, 41 patients attended a second evaluation. Following therapy, acne severity showed a significant reduction in the 41 patients ($p < 0.001$). However, at the end of the 2nd month, the AQOL, HAD-A, and HAD-D scores of the 41 patients did not change compared with the baseline. When the patients with acne were grouped according to the cut-off point of HAD-A and HAD-D, the rate of 41 patients at risk of anxiety and depression did not change at the end of the 2nd month compared with the baseline ($p > 0.05$; Table 2).

The mean score of the FDLQI was 7.6 ± 5.3 (min–max; 0–23). In total, 30 family members attended a second evaluation and their mean FDLQI score was 8.4 ± 5.6 at the baseline and the mean FDLQI score was 4.9 ± 4.0 at the end of the 2nd month; the change was statistically significant ($p = 0.001$; Table 2).

The FDLQI scores showed no significant difference according to sex, age, relationship with patients, educational status, monthly income, or acne severity ($p > 0.05$).

A positive correlation was found between the FDLQI and AQOL scores ($p = 0.034$, $r = 0.202$).

Discussion

By contrast with most other systems, dermatologic disorders are not life threatening; instead, they alter the appearance of the patient and may therefore affect one's psychosocial status, relationships, daily activities, and quality of life as much as severe systemic diseases, regardless of the clinical severity of the dermatologic disorders.[1,2,11] In particular, in patients with acne vulgaris, the risk of anxiety and depression, and therefore suicidal tendencies, is said to be increased. Furthermore, difficulties in social, occupational, and academic fields have been observed, although some different results have been recorded in various research studies.[1,12]

Some studies reported an increased risk of anxiety and depression in acne vulgaris patients accompanied by an impairment of quality of life in comparison with healthy individuals, although some studies showed no difference.[13–20] In this study, we evaluated the quality of life with an acne-specific index, the AQOL, in acne vulgaris patients, which demonstrated a decreased mean