

Assessment of depression symptoms in relation to clinical characteristics in patients with acne vulgaris

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Abstract

Aim: The aim of this study was to assess the influence of disease characteristics (severity, localization, duration) on the level of depression symptoms in patients with acne vulgaris in Albania.

Methods: In this cross-sectional study conducted in 2011-2012, participated 382 patients with acne vulgaris, of both sexes, aged 18-40 years, (mean age: 22.6±4.5 years). Acne was classified by severity of lesions into mild, moderate and severe grade; by localization of lesions: mostly in face, mostly in chest and back and on face, chest, back; by the duration of acne: less than 6 months, 6 months-1 year, 2-5 years, over 5 years. The DASS questionnaire was used to assess the symptoms of depression.

Results: From 382 patients with acne vulgaris, 56.3% of them had a mild grade of acne, 31.4% of them had a moderate grade of acne and 12.3% had a severe grade of acne. About 56% of the patients had lesions mostly in face, 21% of them had lesions mostly in chest and back, and 20% of them in face, chest and back. About 27% of the patients referred a duration ≤1 year, 33% of them a duration 2-5 years and 39.3% of them a duration >5 years. The symptoms of depression were present among 27.5% of the patients. There was no correlation between severity, localization and duration of acne and severity of depression symptoms.

Conclusions: The clinical features did not affect the level of depression symptoms in this study which included Albanian patients with acne vulgaris. Our findings need more robust investigation in future studies in Albania and other similar settings.

Keywords: acne vulgaris, depression, duration, localization, severity.

Introduction

Acne Vulgaris (AV) is usually perceived as a disorder that affects primarily teenagers; however, preteens and post adolescents are commonly affected. Outpatient visits by patients 25 years of age or older has increased over the past 10 years. There are a significant number of people of both genders who report experiencing episodes of acne vulgaris past the teenage years (1).

In some cases, this is persistent AV, meaning that they had AV during their teenage years that did not spontaneously resolve once they progressed into the third decade of life (“the twenties”). They continue to develop lesions of AV either continuously or intermittently. Another subset is late-onset AV, which starts in the post adolescent years (after age 25) with no previous history of acne during the teenage years. Late-onset AV has been reported to occur in 18.4% of women and 8.3% in men (2).

Although some consider acne to be merely a cosmetic problem, it may have significant and enduring emotional and psychological effects. According to the literature, acne vulgaris is much more involved in psychiatric and psychological processes compared to other dermatological diseases. The impact of acne on the mental state of the patient has been recognized since at least 1948, when was noted that “there is no single disease that causes more psychic trauma, more maladjustment between parents and children, more general insecurity and feelings of inferiority, and greater sums of psychic suffering than does acne vulgaris” (3). Since then, many studies have been performed that detail the detrimental effect of acne on the psyche (4,5).

The psychiatric effects of acne can be influenced by patient age and gender, baseline self-esteem issues, anatomical distribution of lesions, disease characteristics (duration, severity, localization, scarring), personality and coping mechanisms, misperceptions regarding etiology, and response and social pressures. Distribution of acne lesions is limited to areas with well-developed sebaceous

glands including the face, back, chest, and upper arms. Unlike other dermatological conditions, which may be limited to areas covered by clothing, acne is apparent.

Addressing non-dermatological effects of acne allows the physician to treat the whole patient and not solely the skin condition.

The aim of this study was to assess influence of disease characteristics (severity, localization, duration) on the level of depression symptoms in Albanian patients with acne vulgaris.

Methods

A cross-sectional, multicentre study was conducted from January 2011 to December 2012 in which participated 382 patients with acne vulgaris, of both sexes, aged 18-40 years (mean age: 22.62 ± 4.55 years). Patients were chosen from different dermatological clinics in different cities of Albania such as Tirana, Korça, Fier and Berat.

A detailed history regarding socio-demographic profile, symptoms and clinical aspects of acne, was undertaken after obtaining consent from all the participants in the study. The study was approved by the Albanian Committee of Medical Ethics.

Patients with other skin diseases, known as psychiatric and medical illnesses, were excluded from this study.

Acne was categorized into mild, moderate and severe based on the number, type and severity of lesions. Lesions included non-inflammatory open (blackheads) and closed (whiteheads) comedones, as well as inflammatory papules, pustules, and nodules (6). Severity of acne vulgaris was rated according to the classification by Lehmann et al. (7). Acne was classified by localization of lesions: mostly in face, mostly in chest and back and face, chest, back. And by the duration of acne: less than 6 months, 6 months-1 year, 2-5 years, over 5 years. The DASS questionnaire was used to assess the symptoms of depression (8). This questionnaire contains 14 questions for the assessment of anxiety, 14 questions for the assessment of stress and 14 questions for the assessment of depression. In this

study, we referred to the depression subscale. The depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest/involvement, anhedonia and inertia. Participants were asked to use 4 point severity/frequency scales to rate the extent to which they had experienced each state over the past week. Based on the total points obtained, the respondents were divided into five groups, with regard (relation) to the expression of depressive symptoms (the degree of depression symptoms): normal (0-9), mild (10-13), moderate (14-20), severe (21-27) and extremely severe (over 28).

Statistical analysis

Kendall's tau-b coefficient was used to test the correlation between the clinical features of acne and the level of depression symptoms. P-values equal or below 0.05 were considered statistically significant.

Results

In this study participated 382 patients with acne

vulgaris, of which 229 (59.9%) were females and 153 (40.1%) were males. The majority of the patients (215 or 56.3% of them) had a mild grade of acne, 120 or 31.4% of the patients had a moderate grade of acne, and a few of them had a severe grade of acne (47 or 12.3%).

According to the localization of acne lesions, most of the patients (215 or 56.3% of them) had lesions mostly in face, 79 or 20.7% of them had lesions mostly in chest and back, and 88 or 20.3% of them had acne lesions on the main localizations, in face, chest and back.

According to acne duration, 40 or 10% of patient referred a duration less than 6 months, 66 or 17.3% of them a duration 6 months-1 year, 126 or 33% of them a duration 2-5 years and 150 or 39.3% of patients an acne duration over 5 years. The symptoms of depression were observed among 27.5% of patients, of which 11.2% had a mild level, 9.2% had a moderate level and 7.3% had a severe level. There were no cases of severe depression.

Table 1. Relationship between depression symptoms and severity of acne

		The level of depression symptoms				Total
		Normal	Mild	Moderate	Severe	
Grade of acne	Mild	45.81%	6.07%	2.36%	2.1%	56.3%
	Moderate	24.08%	3.56%	2.09%	1.57%	31.4%
	Severe	2.62%	1.57%	4.71%	3.43%	12.3%
	Total	72.51%	11.20%	9.16%	7.2%	100%

P = 0.083

As shown in Table 1, there was no correlation between severity of acne and severity of depression symptoms ($P=0.083$). This shows that even

mild degree acne can cause increased levels of these symptoms, as well as a degree of moderate or severe acne.

Table 2. Relationship between depression symptoms and localization of acne

		Localization of acne			Total
		Mostly in face	Mostly in chest and back	Face, chest and back	
Depression Level	Normal	40.6%	16.5%	15.4%	72.5%
	Mild	7.6%	1.8%	1.6%	11.0%
	Moderate	4.5%	1.0%	3.7%	9.2%
	Severe	3.7%	1.3%	2.4%	7.3%
	Total	56.3%	20.7%	23.0%	100.0%

P=0.539

As presented in Table 2, although in the majority of the patients acne lesions were concentrated on the face, there was no correlation between the severity of acne and symptoms of depression

($P=0.539$). This indicates that the localization of acne in less obvious places like the chest and back can cause increased symptoms of depression as well as the acne located in the face.

Table 3. Relationship between depression symptoms and duration of acne

		Duration of acne				Total
		Less than 6 month	6 month-1 year	2-5 year	Over 5 years	
Depression Level	Normal	7.6%	14.4%	23.0%	27.5%	72.5%
	Mild	1.6%	2.1%	3.7%	3.7%	11.0%
	Moderate	0.8%	0.5%	2.6%	5.2%	9.2%
	Severe	0.5%	0.3%	3.7%	2.9%	7.3%
	Total	10.5%	17.3%	33.0%	39.3%	100.0%

P = 0.104

The data displayed from Table 3 shows that there is no correlation between duration of acne and severity of depression symptoms ($P=0.104$), indicating that a smaller duration does not mean fewer depression symptoms.

Discussion

In our study, it was observed that with increasing severity of acne, the level of depression symptoms increases. So in higher degree of acne, the symptoms of depression with moderate level (4.71%) and severe level (3.40%) occupy a considerable place against symptoms of depression with mild level (1.57%), however there was no statistically significant relation between these symptoms and the severity of acne. This means that the severity of acne does not play a significant role when it comes to predicting the level of depression in patients with acne vulgaris. According to literature, Buljan and Šitum (9) suggest that the severity of the clinical features of acne does not necessarily correlate with the severity of depression symptoms. The results of our study are similar to those of some other studies (10,11), although in some studies has been reported a positive relationship between severity of depression and severity of acne (12-14).

Also, in our study, symptoms of depression are more severe when the acne is located on the face,

chest, back, although there was no significant correlation between these symptoms with the localization of acne. Individual and social perception of acne, especially when it predominates in the face, can be related to the feeling of decreased self-esteem, fear, guilt, anger, stress, anxiety or depression (15). It is reported that, after upgrading of the disease in patients with acne localized on the face, there is evidence of significant positive changes in relation to symptoms of anxiety or depression (14,16). On the other hand, in patients with acne localized in the body there is evidence of a small degree of change in relation to these symptoms (14,16). However, in our study no link was found between acne and localization of symptoms of depression.

Regarding the data obtained from our research, there was no statistically significant correlation between the duration of acne and level of depression symptoms ($P=0.104$). Hence, by taking into consideration the duration of acne we cannot judge on the severity of these symptoms. This means that acne duration of less than one year may have the same impact on these symptoms, as well as coexistence with acne for a long period of time (over five years). This finding can vary in different studies. From this point of view, according to different studies, the duration of disease influences the level of depression symptoms. Thus,

according to Abdul Shakoor et al. it was observed that the symptoms of depression decrease with increasing duration of disease (17), while other studies show that with increasing duration of disease the symptoms of depression increase (18,19). Our study shows that the duration of the disease does not influence the level of depression symptoms. This result is similar with some other studies conducted in patients with acne (20,21).

Conflicts of interest: None declared

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Conclusion

The severity, localization, and duration of acne did not affect the level of depression symptoms in this study including Albanian patients with acne vulgaris. Thus, we cannot use the clinical features of acne as a basis to evaluate the psychological status of patients when it comes to depression. Nevertheless, our findings need more robust investigation in future studies in Albania and other similar settings.