

Use of a Cutaneous Body Image (CBI) Scale to Evaluate Self Perception of Body Image in Acne Vulgaris

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Received: February 22, 2013

Accepted: April 24, 2014

SUMMARY Skin disorders such as acne, which have significant cosmetic implications, can affect the self-perception of cutaneous body image. There are many scales which measure self-perception of cutaneous body image. We evaluated the use of a simple Cutaneous Body Image (CBI) scale to assess self-perception of body image in a sample of young Arab patients affected with acne. A total of 70 patients with acne answered the CBI questionnaire. The CBI score was correlated with the severity of acne and acne scarring, gender, and history of retinoids use. There was no statistically significant correlation between CBI and the other parameters – gender, acne/acne scarring severity, and use of retinoids. Our study suggests that cutaneous body image perception in Arab patients with acne was not dependent on variables like gender and severity of acne or acne scarring. A simple CBI scale alone is not a sufficiently reliable tool to assess self-perception of body image in patients with acne vulgaris.

KEY WORDS: acne vulgaris, cutaneous body image, self-perception

INTRODUCTION

Acne vulgaris is usually a self-limited condition, with gradual improvement and spontaneous disappearance after several years, but it may persist into the thirties and forties. Severe acne is associated with increased depression, anxiety, poor self-image, and poor self-esteem. These can be directly or indirectly related to factors such as the severity of acne, severity of scarring, and medications like retinoids (1).

Different measures have been used to assess the psychological impact of acne, including body image perceptions. However, most of these scales are cumbersome and difficult to administer in an out-patient setting. Our study aims to assess the use of a simple cutaneous body image score in evaluating the psychological impact of acne.

SUBJECTS AND METHODS

The study was a cross-sectional study conducted in the out-patient department of a university health clinic in the period from January 2012 to May 2012. The inclusion criteria were age 15 years and older being capable of giving informed consent and a diagnosis of acne vulgaris lasting at least five years, with a minimum Acne Scarring Severity score (ASS) (2) and Global Acne Severity Assessment score (GAS) (3) of 1 (Table 1, 2). Patients younger than 15 years were excluded from the study, as were patients with a known previous diagnosis of significant psychiatric co-morbidity. Patients on medication known to induce acneiform eruptions (like corticosteroids) were also excluded from the study.

Self-perception of cutaneous body image was assessed using the standardized and validated translation of the Cutaneous Body Image (CBI) questionnaire (4) (Table 3).

The questionnaire also included socio-demographic information, history of medication (including present treatment with retinoids), and co-morbidities. GAS and ASS were assessed by a trained dermatologist.

The total and average CBI score were correlated with four parameters – sex, use of retinoids, GAS, and ASS. Pearson's correlation co-efficient was used for evaluating the significance of correlation (a *P*-value of 0.05 was considered significant). Statistical analysis was done using SPSS16 (IBM, Armonk, New York, USA).

Ethical permissions were obtained from the clinics' authorities as well as our institution after approval of the proposal and data collection tools. Consent forms were obtained from patients after they received adequate information about the study. Data confidentiality was maintained throughout the study. The patients who volunteered to participate were given the questionnaire; and a trained nurse explained the items on the questionnaire to the patient. The study took place in the dermatology clinic of a university

Table 1. Global acne severity scale*

Grade 1	Macular scarring
Grade 2	Mild atrophy or hypertrophic scarring that may not be evident at 50 cm distance or greater and may be adequately masked by makeup or hair patterns
Grade 3	Moderate atrophic or hypertrophic scarring obvious at social distances and not easily masked
Grade 4	Severe atrophic or hypertrophic scarring

*According to Dréno *et al.* (3)

health center, and the procedure was supervised by the dermatologist who was a member of the research team. The other members of the research team included a psychiatrist (Mostafa Amr) and a statistics expert (Tarek Shams).

RESULTS

The questionnaire was completed by 70 patients. There were 39 (55.7%) women and 31(44.3%) men with an age range of 15 to 35 years (mean \pm SD: 21.0 \pm 2.9). All the patients had acne for a period of more than 5 years. The mean score for Global Acne Severity Assessment (GAS) was 2.48 (SD=1.22) and the mean score for the Acne Scarring Severity was 1.67 (SD=0.77). Severe ASS was diagnosed in 17% of the patients, and the remaining had mild or moderate subtypes. 80% of the patients had mild to moderate GASS and the remaining had severe subtypes. Systemic retinoids were used for the treatment of 24 patients (34.3%). CBI total scores ranged from 32 to 63 (mean \pm SD: 50.8 \pm 7.6). The mean CBI individual items (1, 3) that were 6.99 \pm 1.86 and 6.9 \pm 1.81 respectively.

Correlation analysis of the CBI score with GAS, ASS, gender, and use of retinoids was done using the Pearson Correlation Coefficient (Table 4). There was no significant correlation between the total CBI score or the individual items and any of the other parameters.

Table 2. Acne scarring severity scores*

0	Clear. No lesions	Residual pigmentation and erythema may be seen
1	Almost clear. Almost no lesions	A few scattered open or closed comedones and very few papules
2	Mild	Easily recognizable: less than half of the face is involved. A few open or closed comedones and a few papules and pustules
3	Moderate	More than half of the face is involved. Many papules and pustules, many open or closed comedones. One nodule may be present
4	Severe	Entire face is involved, covered with many papules and pustules, open or closed comedones and rare nodules
5	Very severe	Highly inflammatory acne covering the face with presence of nodules

*According to Goodman and Baron (2).

DISCUSSION

Cutaneous body image may be defined as the individual's mental perception of the appearance of their integumentary system, i.e., their skin, hair, and nails (4). This image can be disturbed when there is a discrepancy between a person's self-perception and observed interpersonal experiences. Cutaneous body image is an important dermatologic construct, which can be affected when individuals have a cosmetically disfiguring skin disease or when they believe they have skin diseases (4). Patient dissatisfaction with cutaneous body image is often the primary consideration in deciding whether or not to initiate treatment in some skin disorders (5). In this study, we empirically examined the predictors of cutaneous body image among a sample of Arab patients with acne in a University clinic in Saudi Arabia.

Our study demonstrated that there was no significant correlation between overall CBI score and gender, use of retinoids, GAS, or ASS. Our results suggest that cutaneous body image, while definitely being useful to study the psychological impact of some dermatological conditions, is of questionable utility in the case of acne with or without scarring.

Acne vulgaris are more common in men than in women (6). The lack of correlation between gender and CBI in our study contradicts the findings of Dalgard *et al.* (7), in their survey of self esteem and body satisfaction among 3775 late German adolescents. They reported that adolescents with acne had poor body satisfaction, with girls expressing even lower satisfaction than the boys. This difference in comparison with our study may be due to the smaller sample size (n=70) in our study, as this increases the possibility of Type II errors.

Oral isotretinoin is a vitamin A derivative, marketed as an oral treatment for severe acne (8). In recent years, it has also been used for mild to moderate forms of acne (9). Treatment with retinoids was insignificantly correlated with body image dissatisfaction

in our study, which contradicts earlier research that retinoids were associated with an increase in relative risk estimates for depression, psychotic symptoms, suicide, negative self image, and attempted suicide (10,11). In a similar context, a recent study accredited by the The Psychodermatology Group of the French Dermatology Society showed that psychological disturbances, including depression and other suicidal tendencies, are very common during adolescence and are clearly increased by acne, particularly where they are severe; isotretinoin did not appear to increase this risk (12). In a population-based study of the level of knowledge and concerns of acne patients about isotretinoin in the Qassim regions, Al-Harbi *et al.* noted that the majority of acne patients are aware of isotretinoin and its side effects and accepted this drug well (13). We postulate that in many patients the improvement produced by retinoids might actually contribute to improvement in cutaneous body image.

In our study, the most unexpected finding was that the body image satisfaction appeared to be unrelated to acne severity (measured by GAS, ASS). Previous research suggests that the severity of the psychological distress in acne that includes depression, anxiety, low self-esteem, body image problems, self-consciousness, lack of self confidence, and anger appears to correlate with the patient's rating of acne severity (14,15). However, the findings in our study are consistent with the findings of a recent study in which patients with acne showed body image disturbances (defined as a persistent report of dissatisfaction, concern, and distress that is related to an aspect of appearance and measured by the Body Image Disturbance Questionnaire (BIDQ) (16). The fact that except for two items (items 3 and 4), none of the other items have a direct significance in acne is the other major factor that would probably explain the absence of low CBI scores in our study.

Previous studies have suggested that the Arab culture generally adopts a more stoic view towards purely cosmetic problems. The inadequacy of CBI as a method for measuring the body image satisfaction

Table 3. Cutaneous Body Index (CBI) scale*

Item 1	"I like the overall appearance of my skin"
Item 2	"I like my complexion or overall color of my skin"
Item 3	"I like the appearance of the skin of my face"
Item 4	"I like the complexion or the overall color of the skin of my face"
Item 5	"I am very satisfied with my hair"
Item 6	"I am satisfied with the appearance of my fingernails"
Item 7	"I am satisfied with the appearance of my toenails"

*According to Gupta *et al.* (4).

Table 4. Correlation analysis of CBI scores with gender, Acne Scarring Severity, Global Acne Severity Assessment score, and treatment with retinoids

	CBI	CBI 1	CBI 3
Sex (Pearson coefficient)	-.058	-.069	.062
Sex - p value	.635	.569	.608
GAS (Pearson coefficient)	-.048	-.207	-.102

among Arabs is congruent with the findings of a previous study that estimated body image in a sample of Egyptian post menopausal breast cancer patients who failed to show body image distress in evaluative component compared to behavior component of body image, which reflected actions about or toward the body (17). Furthermore, in a cross-sectional study of the beliefs, knowledge, and perceptions on acne among 700 Saudi students (53.4% were acne sufferers) in Riyadh, Saudi Arabia 62% believed that acne are not a serious health problem, whereas 19% accepted acne as a purely cosmetic problem and were more likely to seek advice and treatment by beauticians in cosmetic salons rather than do a medical consultation with dermatologists (18). However, the mild form of the illness prevalent in that study (17% of the patients had severe ASS, and the remaining had mild or moderate subtypes; 80% had mild to moderate GASS and the remaining had severe subtypes) may have contributed to better CBI.

CONCLUSION

Our study has several limitations. The sample size was small and the study population does not necessarily constitute a good representative sample of all patients with acne. A prospective study in which body image scores were measured by a combination of scales measuring the cognitive, behavioral, and affective aspects would provide a better assessment of body image in patients with acne, as opposed to only using a satisfaction measure such as CBI.

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