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ORIGINAL ARTICLE

Screening for Body Dysmorphic Disorders in Acne Patients: A Pilot Study☆

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KEYWORDS
Body dysmorphic disorder;
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Abstract

Introduction: Body dysmorphic disorder (BDD) is a mental health condition that is difficult to diagnose; it can cause a great deal of suffering, and treatment is often complex and challenging.
Material and method: The study population comprised 81 consecutive dermatology outpatients who met the inclusion criteria for participation. Participants were treated at hospitals in both urban (Zaragoza) and rural areas (Alcañiz). The project was based on a prospective and observational pilot study. Assessment instruments used: Cook's Acne Grading Scale and Body Dysmorphic Disorder Questionnaire (BDDQ) (Spanish translation).

Possible cases of BDD were identified by means of 2 criteria: 1) A positive result in the BDDQ (4 positive points and a negative exclusion question); and, 2) A Cook's Acne Grading Score that reflected non-noticeable/mild lesions (the most stringent criteria) or moderate lesions (least stringent criteria)
Results: The age range of the patients was from 13 to 43 years old. The average age was 19 with a standard deviation of 6.2. Of the 81 participants, 54.3% were women. 61.7% were seen in a rural hospital (Alcañiz Hospital) and 38.3% in an urban one (University Hospital of Zaragoza). When more restrictive criteria regarding the seriousness of the condition were applied (only patients with mild acne), the BDDQ screening resulted in a positive BDD prevalence rate of 8.6% (7 patients); if the criteria were less restrictive (including patients with moderate lesions), the rate was 14.8% (12 patients).
Discusion: Patients who screened positive for BDD reported spending an average of 2 hours a day thinking and worrying about their appearance. These results highlight the importance of

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screening for possible cases of BDD in order to follow up these patients and recommend they be seen by a mental health specialist to confirm the diagnose and offer treatment for the disorder. BDD has a serious and negative impact on the lives of those affected.

PALABRAS CLAVE
Trastorno dismórfico corporal;
Detección;
Pacientes con acné

Detección de trastorno dismórfico corporal en pacientes con acné: estudio piloto

Resumen

Introducción: El trastorno dismórfico corporal (TDC) es una enfermedad mental difícil de diagnosticar; puede causar una gran cantidad de sufrimiento, y el tratamiento a menudo es complejo y desafiante.

Material y método: La población de estudio comprendía 81 pacientes ambulatorios dermatológicos consecutivos que cumplían los criterios de inclusión para la participación. Fueron tratados en hospitales en zonas urbanas (Zaragoza) y rurales (Alcañiz). Es un estudio piloto prospectivo y observacional. Se utilizaron como instrumentos de evaluación: a) La escala de gradación del acné de Cook y b) El Cuestionario de Trastorno Dismórfico Corporal (Body Dysmorphic Disorder Questionnaire, BDDQ) (traducción al español). Los posibles casos de TDC se identificaron mediante 2 criterios: 1) Un resultado positivo en el BDDQ (4 puntos positivos y una pregunta de exclusión negativa); y 2) Escala de gradación del acné de Cook que reflejó lesiones no perceptibles/leves (los criterios más estrictos) o lesiones moderadas (criterios menos estrictos)

Resultados: El rango de edad de los pacientes era de 13 a 43 años. La edad promedio fue 19 con una desviación estándar de 6,2. De los 81 participantes, el 54,3% eran mujeres y el 45,7% eran hombres. El 61,7% vivía en el área rural cubierta por el hospital de Alcañiz y el 38,3% era del área urbana atendida por el Hospital Universitario de Zaragoza. Cuando se aplicaron criterios más restrictivos con respecto a la gravedad de la afección (solo los pacientes con acné leve), el proceso de detección de BDDQ resultó en una tasa de prevalencia de TDC del 8,6% (7 pacientes); si los criterios fueron menos restrictivos (incluidos los pacientes con lesiones moderadas), la tasa fue del 14,8% (12 pacientes).

Discusión: Vale la pena recordar que los pacientes con TDC que participaron en este estudio pasan un promedio de 2 h al día pensando y preocupándose por su apariencia. Este hecho es un recordatorio de la importancia de diagnosticar y tratar correctamente el TDC ya que la afección claramente tiene un impacto serio y negativo en las vidas de los afectados.

INTRODUCTION

Body dysmorphic disorder (BDD) is a mental health condition that is difficult to diagnose; it can cause a great deal of suffering, and treatment is often complex and challenging. The main symptom is a subjective feeling of ugliness or of a physical defect that the patient believes is evident to others, despite the fact their appearance is within the parameters of normality.[1] The DSM-IV states that diagnosis is confirmed when the patient suffers clinically significant distress or functional impairment.[2]

Individuals with BDD worry about how they look; they feel unattractive or even hideous. The focus is usually on the face or head, but patients may be preoccupied with any part of the body, or the entire body. Appearance-related apprehension is difficult to control and people with this disorder spend many fretful hours mirror checking and attempting to hide the perceived defect or flaw. It is a chronic and distressing condition that can lead to severe social, academic and family difficulties.[3]

BDD is often under diagnosed because patients are too ashamed to talk about their symptoms and, if not specifically contemplated, it is easy to miss.[4] The prevalence of BDD in the general population is around 2%.[5] Higher prevalence rates have been reported among adolescents (3.6%).[6] Prevalence in dermatological clinics is between 10% and 12%.[7]

Although the onset of BDD is usually during adolescence, patients are commonly diagnosed after many years of suffering. This is due to the fact that BDD is often unidentified and many youngsters seek non-psychiatric medical treatment, primarily from dermatologists and surgeons.[4]

There are several links between acne and BDD:

1) Developmental: the average age of onset (16 years) coincides with the appearance of acne in adolescence[8];

2) Phenomenological: body image is largely based on the skin; facial acne is the area of most frequent concern[9];
3) Compulsive behaviours: 93% of patients with BDD and compulsive excoriation is related to acne.[10] Sixty-four percent of BDD cases that include tanning behaviour are associated with acne.[11]

Youngsters with acne represent a risk group and should therefore be screened for BDD by a dermatologist. Appearance-specific questions are not asked in dermatological outpatient consultations and the disorder may not be detected. Psycho-education should be offered to patients, as well as the possibility to be referred to a mental health specialist.

The aim of this work was to undertake a pilot study for screening acne patients for BDD in a dermatology outpatient clinic and to observe the relationship between the possible cases of BDD and sociodemographic and clinical variables.

Methods

Sample

Consecutive dermatology out-patients who met the inclusion criteria and gave consent to participate in study. Participants were recruited from a public urban hospital in Zaragoza and a public rural hospital in Alcañiz from February to May 2013.

Inclusion criteria were: (i) a diagnosis of acne vulgaris; (ii) signed, informed consent of voluntary participation; (iii) the absence of any language difficulties or intellectual dysfunctions.

The study PI13/0004 was approved by the Aragon Clinical Research Ethics Committee on 23 January of 2013 and conducted in accordance with the World Medical Association Helsinki Declaration.

Design

The project was based on a prospective and observational pilot study.

The dermatologist noted basic sociodemographic information (sex, age and area of residence) and collected clinical information regarding: age of acne onset; duration; severity (mild, moderate or severe, in accordance with the Cook scale); and, location of lesions (visible/non-visible, skin areas). Patients were also asked appearance-specific screening questions to identify possible BDD (Body Dysmorphic Disorder Questionnaire). Patients who gave positive answers to the screening questions were offered information about BDD and a referral to a mental health specialist.

Assessment instruments

Cook's Acne Grading Scale: In 1979, Cook *et al.*, evaluated the overall severity of acne on a 0-8 scale, based on photographic standards that illustrated grades 0, 2, 4, 6 and 8. A nine-point scale for comedones, papules and macules on the face was also utilsed.[12]

Body Dysmorphic Disorder Questionnaire (Spanish translation): The BDDQ is a short, self-administered questionnaire, derived from the DSM-IV criteria for BDD. It was developed by Phillips as a screening instrument. The BDDQ has shown good concurrent validity with a sensitivity rate of 94%, specificity of 90% and a likelihood ratio of 9.4.[3,13]

Screening for BDD

Possible cases of BBD were identified by means of two criteria: 1) A positive result in the BDDQ (4 positive points and a negative exclusion question); and, 2) A Cook Acne Grading Score that reflected non-noticeable/mild lesions (the most stringent criteria) or moderate lesions (least stringent criteria)

Statistical analyses

The descriptive analysis of the quantitative variables included the corresponding frequency distributions; means and standard deviations were also calculated.

The bivariate analysis used contingency tables and the Chi-squared test to identify relationships between the qualitative variables. Depending on whether they followed a normal distribution, either the Student T or Mann-Whitney U test was utilised to study possible differences between the measures of central tendencies of the compared groups. Statistical significance was 5% and SPSS® version 16 was the statistical support.

Results

Clinical characteristics

The study population comprised 81 patients. The age range of the patients was from 13 to 43 years old. The average age was 19 (SD:6.2), 54.3% were women and 45.7% were men. Sixty-one point seven per cent lived in the rural area covered by the Alcañiz hospital and 38.3% were from the urban area served by the University Hospital of Zaragoza.

The average age of acne onset was 14.9 (SD:4.1). Early onset (<16) occurred with 71.6% of the patients while 28.4% suffered late onset. The average time period that they had lived with the condition was 4.4 years (SD:3.6).

Ninety-two-point six percent of patients had acne lesions on the face, 58% on the neck, 19.8% in the pectoral region and 4.9% on other parts of their bodies. Sixty-six-point seven percent of the lesions were located in visible areas. Almost half of the 81 cases (48.1%) were classified as mild acne, 33.3% were moderate and 18.5% were severe.

When more restrictive criteria regarding the seriousness of the condition were applied (only patients with mild acne), the BBDQ screening process resulted in a BDD prevalence rate of 8.6% (7 patients); if the criteria were less restrictive (including patients with moderate lesions), the rate was 14.8% (12 patients).

Comparative analysis of patients with positive BDD screening and those with negative results

No statistically significant differences were found with regards to sex, area of residence (rural or urban), or age of onset, from a quantitative or qualitative point of view (early/late onset).

The time period of suffering acne was statistically significant in relation to a positive result in the BDDQ; ($p = 0.034$; 6.4 ± 5 years vs 4 ± 3 years). Concerning the age of the participants, there is a positive result in the screening process ($p = 0.06$; 22.4 ± 8.4 years vs 18.8 ± 5.6 years).

No statistically significant relationships were found regarding the location of skin lesions: visible/not-visible; on hands, neck or back.

The location of acne on the chest was significant: 42% of those with positive BDDQ results had acne on the chest, compared to 10% of negative scores.

Patients that were BBD positive spent an average of two hours per day worrying about their appearance and this contrasts sharply with those patients that had negative screening results (30 minutes) ($p = 0.005$).

Discussion

The prevalence of BDD found among the acne patients who underwent our screening programme was similar to rates found in other studies with acne sufferers and general dermatological populations. Uzun *et al.*[14] reported a prevalence of 9% among BDD patients with mild acne, almost the same result as that of the present study (8.6%). In another study with BDD acne patients, Bowe *et al.*[15] found a prevalence of between 14% and 21%, depending on the degree of severity of the acne used as the criterion. Research on general dermatological patients has revealed a prevalence of BDD of between 6% and12%,[7,9] which is similar to the findings of this present work.

As previously mentioned, there were statistically significant differences between BDD and non-BBD patients with the variables time period of suffering acne and age at the time of the screening (not onset of acne). It is possible that BDD can only be clinically identified after a certain period of time suffering acne, and at a certain age; it is also possible that the disorder appears in a subclinical manner and the screening test is unable to detect the problem. Although subsyndromal BDD may begin at the age of 13, the condition is significantly more prevalent between the ages of 15 to 18 than from 12 to 14, therefore, when BDD appears in relation to the preoccupation caused by acne it is probable that there is a time period before the full symptomology develops and diagnosis can be confirmed.[8]

This study found a significant association between BBD and having acne on the chest. All the patients who screened positive for BDD, and had acne on the chest, were women; a reflection of the importance of this area of the body for female corporal self-image. Despite the fact that no significant differences were found among the general study population regarding sex and BDD, in the case of this particular variable there seems to be no room for doubt.

This research is not without its limitations: Firstly, a much larger sample population would have produced more statistical power. Secondly, when establishing which participants should be included as BDD patients in accordance with the criterion of severity it would have been better to use an acne severity scale instead of just the categories of mild, moderate or severe. These two issues will be taken into account in the development of a future project and it should be underlined that the present work was designed as an initial pilot study.

In conclusion, it is worth remembering that the patients who screened positive for BDD in our study, spend an average of 2 hours a day thinking and worrying about their appearance. This fact is a reminder of the importance of correctly diagnosing and treating BDD as the condition clearly has a serious and negative impact on the lives of those affected by it. In the words of Enrico Morselli, who first described the disorder, ''The life of the dysmorphic patient is truly miserable; in the midst of their daily routines, conversations, while they are reading, eating, in any place and at any moment, they are trapped by the doubt of deformity...''.[1]

Bibliografía

1. Morselli E. Sulla dismorfofobia e sulla tafefobia. Boll Reale Accad Med Genova. 1891;6:110–9.
2. Diagnostic and statistical manual of mental disorders, 4th ed. Washington, DC: American Psychiatric Association; 1994.
3. Phillips KA. The broken mirror: Understanding and treating body dysmorphic disorder. Nueva York: Oxford University Press; 2005.
4. Phillips KA, Didie ER, Feusner J, Wilheim S. Body dysmorphic disorder: Treating an underrecognized disorder. Am J Psychiatry. 2008;165:1111–8.
5. Rief W, Buhlmann U, Wilhelm S, Borkenhagen A, Brähler E. The prevalence of body dysmorphic disorder: A population-based survey. Psychol Med. 2006;36:877–85.
6. Möllmann A, Dietel FA, Hunger A, Buhlmann U. Prevalence of body dysmorphic disorder and associated features in German adolescents: A self-report survey. Psychiatry Res. 2017;254:263–7.
7. Ribeiro RVE. Prevalence of body dysmorphic disorder in plastic surgery and dermatology patients: A systematic review with meta-analysis. Aesthetic Plast Surg. 2017;41:964–70.
8. Bjornsson AS, Didie ER, Grant JE, Menard W, Stalker E, Phillips KA. Age at onset and clinical correlates in body dysmorphic disorder. Compr Psychiatry. 2013;54:893–903.
9. Dogruk Kacar S, Ozuguz P, Bagcioglu E, Coskun KS, Uzel Tas H, Polat S, et al. The frequency of body dysmorphic disorder in dermatology and cosmetic dermatology clinics: A study from Turkey. Clin Exp Dermatol. 2014;39:433–8.
10. Grant JE, Menard W, Phillips KA. Pathological skin picking in individuals with body dysmorphic disorder. Gen Hosp Psychiatry. 2006;28:487–93.
11. Phillis KA, Conroy M, Dufresne EG, Menard W, Didie ER, Hunter-Yates J, et al. Taning in body dysmorphic disorder. Psychiatr Q. 2006;77:129–38.
12. Cook CH, Centner RL, Michaels SE. An acne grading method using photographic standards. Arch Dermatol. 1979;115:571–5.
13. Brohede S, Wingren G, Wijma B, Wijma K. Validation of the Body Dysmorphic Disorder Questionnaire in a community

sample of Swedish women. Psychiatry Res. 2013;210: 647–52.
14. Uzun O, Basaglu C, Akar A, Cansever A, Ozsahin A, Cetin M, et al. Body dysmorphic disorder in patients with acne. Compr Psychiatry. 2003;44:415–9.
15. Bowe WP, Leyden JJ, Crerand CE, Sarwer DB, Margolis DJ. Body dysmorphic disorder symptoms among patients with acne vulgaris. J Am Acad Dermatol. 2007;57: 222–30.