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Clinical differences between morbid obese patients with and without binge eating

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Introduction. Our objective was to evaluate clinical differences between morbid obese patients with and without binge eating.

Methods. We evaluated 210 morbid obese patients who were referred consecutively to a psychiatric evaluation in a general hospital for different reasons. We used a clinical interview, evaluated psychiatric comorbidity and applied a series of psychopathology and eating behavior scales: Beck Depression Inventory (BDI), Beck Anxiety Inventory (BAI), Maudsley Obsessive-Compulsive Interview (MOCI), Barrat Impulsiveness Scale (BIS), Eating Disorder Inventory (EDI), Eating Attitudes Test (EAT), Bulimic Investigatory Test Edinburgh (BITE) and Body Shape Questionnaire (BSQ). The sample was divided in two subgroups: patients with binge eating according to ICD-10 and DSM-IV criteria, and patients without binge eating. The first subgroup was composed of 14 patients with bulimia nervosa, 32 with binge eating disorder, and 15 patients with binge eating who did not fulfill criteria for bulimia or binge eating disorder (subgroup was composed by 61 patients vs 145 patients without binge eating).

Results. Binge eating patients showed more psychopathology, more prevalence of dysthymia, higher score in impulsiveness, and scales that evaluated eating disorder. Binge eating patients showed more familial background of eating disorders; more body dissatisfaction in spite of a lower Body Mass Index (BMI). This group showed more functional disability induced by obesity and more weight and shape overconcern.

Conclusions. The findings suggest that the morbid obese with binge eating constitute a distinct subgroup (independently of eating disorder diagnosis) among the obese population, with more psychopathology severity, especially affective disorder, more impulsivity, and more severity in core items of eating disorder scales and body dissatisfaction.

Key words:
Binge eating. Psychopathology. Morbid obesity. Binge eating disorder. Eating disorder. Impulsivity.

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Diferencias clínicas entre pacientes obesos mórbidos con y sin atracones

Introducción. Nuestro objetivo fue evaluar las diferencias clínicas de pacientes obesos con y sin alteraciones de la conducta alimentaria.

Material y métodos. Se estudiaron a 210 pacientes con obesidad mórbida derivados de forma consecutiva a una consulta de psiquiatría en un hospital general por diferentes motivos. Se realizó una entrevista clínica, se valoró la presencia de comorbilidad psiquiátrica y se aplicaron una serie de escalas de psicopatología y de conducta alimentaria: Escala de Depresión de Beck (BDI), Escala de Ansiedad de Beck (BAI), Inventario de Obsesiones-Compulsiones de Maudsley (MOCI), Escala de Impulsividad de Barrat (BIS), Inventario de Trastornos de la Alimentación (EDI), Test de Actitudes hacia la Comida (EAT), Test de Bulimia de Edimburgo (BITE) y Cuestionario sobre la Figura Corporal (BSQ). La muestra se dividió en dos grupos: pacientes con conductas de atracones según las definiciones de las CIE-10 y el DSM-IV y aquellos sin estas conductas. En el primer grupo se incluyeron 14 pacientes con bulimia nerviosa, 32 con criterios de trastorno por atracón y 15 pacientes con atracones sin criterios para uno de los dos trastornos citados (total, 61 pacientes con atracones frente a 145 sin atracones).

Resultados. Los pacientes con atracones tenían más psicopatología, fundamentalmente mayor prevalencia de distimia, eran más impulsivos según la BIS y obtenían puntuaciones más elevadas en algunas escalas que valoraban la alteración de la conducta alimentaria. Estos pacientes tenían más antecedentes familiares de trastornos de la conducta alimentaria (TCA) y presentaban mayor insatisfacción corporal a pesar de un menor índice de

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masa corporal (IMC). Este grupo refería mayores limitaciones funcionales debidas a su obesidad y presentaba mayor obsesividad sobre el peso y la comida.

Conclusiones. Por tanto, los obesos mórbidos con atracones forman un grupo posiblemente homogéneo (independientemente del diagnóstico de trastorno de la conducta alimentaria presente) y diferenciado del resto de los obesos mórbidos por la existencia de mayor psicopatología fundamentalmente de tipo afectivo, mayor impulsividad y mayor severidad en las escalas que evalúan síntomas nucleares de los trastornos de la conducta alimentaria e insatisfacción corporal.

Palabras clave:
Atracones. Psicopatología. Obesidad mórbida. Trastorno por atracón. Trastornos de la conducta alimentaria. Impulsividad.

INTRODUCTION

Obesity is a chronic disease having elevated prevalence that is of great relevance in public health due to its increased incidence in Western countries and its serious repercussions for health. Obesity is not considered an eating behavior disorder (EBD). However, a significant subgroup of obese subjects have eating behavior disorders, although the clinical and prognostic relevance of these alterations is debatable. In 1959, Stunkard proposed the so-called binge eating syndrome and in 1992, Spitzer established the definition of Binge Eating Disorder (BED)[1]. Therefore, provisional diagnostic criteria have recently been described for this disorder[2]. Currently, patients who suffer this disorder can only be diagnosed within the unspecified EBD category, both in the DSM-IV[2] as well as the ICD-10[3] classification. Prevalence of BED in primary care ranges from 3.3 % to 8.5 %[4]. BED is more frequent than other EBD[5]. In the obese, prevalence of BED is 9 % to 34 %[1,6,7].

Binge eating disorder (BED) diagnosis is used to identify subjects who have binge eating as well as bulimia nervosa (BN) but without its compensatory behaviors characteristics. Provisional research criteria of this disorder establish a series of strict criteria regarding frequency of binge eating and its behavior repercussions[2].

BED is a controversial nosological entity. Four possibilities of conceptualization have been described: a variant of bulimia nervosa, a behavior subtype of obesity, a reflex behavior of the presence of psychopathology in obesity or an independent disorder[8]. Some authors support the validity of this diagnosis as it has important clinical differences regarding the obese without associated EBD and has differences regarding other patients with anorexia or bulimia nervosa[9]. This disorder develops in at a later age than BN[10], with greater presence of males than in other EBD and with core symptoms characteristic of the eating behavior disorders[11]. It is also characterized by significant social deterioration and overconcern about the body, figure and weight[6]. For other authors, the disorder has elevated clinical heterogeneity, a very variable course, with frequent spontaneous remissions, elevated response to placebo and efficacy of the classical programs of weight loss to decrease binge eating. Thus, simply, it would be useful as a marker of the presence of psychopathology[1]. Furthermore, it has elevated clinical similarity to BN, supporting the idea of vulnerability continuum[12]. The authors coincide that the obese with BED form a subgroup with greater psychopathology, with more prevalence of mood disorders, personality disorders and concomitant drug dependence[1,7,13-16].

In addition, provisional research criteria for BED of the DSM-IV have been questioned. Limited differences have been observed between those patients who fulfill all the criteria and those with binge eating who do not fulfill them. For some, this suggests a nosological continuum between them and the presence of all the BED criteria would only indicate greater severity[17]. Other authors support a continuum between BED, BN and subthreshold pictures of both[18].

Our objective was to assess the clinical differences between both groups of patients with morbid obesity evaluated in a psychiatry consultation of the general hospital: those with presence of binge eating versus those who have no disorder in this sense.

MATERIAL AND METHODS

The sample consists of 210 patients with morbid obesity criteria who were evaluated consecutively in the Psychiatry Unit of a General Hospital for several reasons (presurgical assessment, presence of eating behavior disorders or presence of psychopathology). All the patients underwent a clinical interview. A series of clinical and sociodemographic variables were collected in a systematized way and different scales were used to evaluate psychopathology and eating behavior: Beck Depression Inventory (BDI)[19], Beck Anxiety Inventory (BAI)[20], Eating Attitudes Test (EAT)[21] Eating Disorder Inventory (EDI)[22], Bulimic Investigatory Test Edinburgh (BITE)[23], Body Shape Questionnaire (BSQ)[24], Maudsley Obsessive-compulsive Interview (MOCI)[25] and Barrat Impulsiveness Scale (BIS)[26]. In all the patients, the presence or not of all the diagnostic criteria of bulimia nervosa of DSM-IV and ICD-10 and the presence or not of diagnostic criteria of research for binge eating disorder of DSM-IV were evaluated systematically. Psychiatric diagnoses were made through a clinical interview, following the ICD-10 criteria. Body dissatisfaction was measured on a Likert type scale from 1 to 10 (maximum dissatisfaction). Presence and severity were evaluated on a mild-moderate-serious scale of clinical variables of interest. Presence of self-aggressive behaviors and suicidal ideation and background of suicide attempts were investigated.

A comparison between groups (patients with and without binge eating) was done with the chi-square test for

qualitative variables and the Student's t test for quantitative variables. Previously a test of homogeneity of the variances for quantitative variables was done with the Levene test. Fisher's exact test was used when the chi-square was not applicable.

RESULTS

The sample was divided into two subgroups according to the presence or not of binge eating defined by criterion A of the diagnostic criteria of bulimia in both the ICD-10 and DSM-IV. Previously, an assessment was made of the subgroups of patients with bulimia nervosa criteria and those who complied with the provisional criteria of the DSM-IV binge eating disorder. Given that they were small subgroups, no statistical comparison was made, although it was observed that the clinical and sociodemographic characteristics were very similar to each other and between patients with only binge eating (without fulfilling BN or BED criteria). Fourteen 14 patients in the sample were diagnosed of bulimia nervosa according to DSM-IV criteria, 32 fulfilled the DSM-IV criteria for binge eating disorder and 15 had binge eating (according to the DSM-IV and ICD-10 binge eating definition), but did not fulfill criteria for one of the previous diagnosis. Among these groups, no relevant clinical differences were observed except for a major prevalence of personality disorders in the bulimia subgroup. There were 6 patients without binge eating who reported the existence of self-provoked vomits, all with mild intensity and infrequent and they were included in the obese group without binge eating.

Patients with binge eating were younger, had more family background of EBD and a tendency to greater psychiatric family burden, above all in the mother, was observed (table 1). This group had greater psychiatric comorbidity, basically greater presence of dysthymia and had personality disorder more frequently. They reported suicidal ideation, greater number of suicidal attempts, more insomnia problems and greater use of antidepressants (table 2). No statistically significant differences were observed in the prevalence of drug dependence, although there were 10 % more addicts in the binge eating group. Among the patients who had had any suicide attempt, mean attempts tended to be greater in the binge eating group (mean: 2.1; SD: 1.5) compared to the group without binge eating (mean: 1.2; SD: 0.4).

As was to be expected, patients with binge eating had more EBD diagnoses, both following DSM-IV as well as ICD-10 criteria (table 2). They also had greater body dissatisfaction, greater weight, figure and food overconcern, and more sociofunctional limitations due to their obesity. Use of diuretics, laxatives and anorexigenic agents with purgative purposes was admitted by a small percentage of patients. Use of laxatives was greater in the binge eating group (3 patients, 5 %, vs 1 patient, 0.7 %, Fisher's exact test with p = 0.07). Patients with binge eating had lower self-esteem, more anxious and impulsive personality traits and reported more guilty ideas. There were no differences in the presence of alexithymia. BMI at the time of evaluation was greater in patients without binge eating (table 3). Patients with binge eating had higher scores on some scales that evaluated eating behavior, on the Beck depression scale and on Barrat impulsiveness scale (table 4).

Table 1 Sociodemographic characteristics

	With binge eating (n = 61)	Without binge eating (n = 149)	χ^2 or t	p
Age (years)	38.39 (SD: 11.13)	42.20 (SD: 10.99)	2.27	0.002
Woman	54 (88.5 %)	126 (84.6 %)	0.55	NS
Married	40 (66.7%)	100 (69.4 %)	0.56	NS
Presence of medical disease	36 (59 %)	89 (60.1 %)	10.6	NS
Diabetes mellitus	2 (3.3 %)	6 (4.1 %)		
Arterial hypertension arterial	7 (11.5 %)	20 (13.5 %)		
Others	27 (44.2 %)	63 (42.6 %)		
FB of EBD	7 (11.7 %)	0 (0 %)	Fisher	0.001
FB of obesity (1st degree relative)	34 (56.7 %)	81 (55. 9 %)	0.01	NS
Father with psychiatric disorder	7 (11.9 %)	12 (8.6 %)	0.52	NS
Mother with psychiatric disorder	13 (22 %)	17 (12.1 %)	3.2	0.07
Siblings with psychiatric disorder	10 (16. 9 %)	14 (10 %)	1.9	NS

SD: standard deviation; NS: non-significant; FB: family background; EBD: eating behavior disorder.

Table 2 Psychiatric diagnosis and psychopathology

	With binge eating (n = 61)	Without binge eating (n = 149)	χ^2 or t	p
Comorbid psychiatric diagnosis	35 (57.4%)	64 (43.5%)	3.3	0.07
Dysthymia	22 (36.1%)	26 (17.7%)	8.2	0.004
Other mood disorders	7 (11.4%)	11 (7.5%)		
Anxiety disorders	4 (6.5%)	10 (6.7%)		
Adaptation disorders	2 (3.3%)	14 (9.5%)		
Other psychiatric disorders	0 (0%)	3 (2.1%)		
Personality disorder	22 (36.7%)	23 (15.8%)	10.9	0.001
Emotional instability disorder	4 (6.7%)	1 (0.7%)		
Histronic disorder	2 (3.3%)	4 (2.7%)		
Anancastic disorder	4 (6.7%)	6 (4.1%)		
Anxious disorder	0 (0%)	2 (1.4%)		
Dependent disorder	1 (1.7%)	0 (0%)		
Unspecified disorder	11 (18.3%)	10 (6.8%)		
Drug dependence	29 (49.2%)	58 (40%)	1.43	NS
Alcohol dependence	2 (3.4%)	1 (0.7%)		
Nicotine dependence	24 (40.7%)	55 (37.9%)	0.44	NS
Multiple drug dependence	3 (5.1%)	2 (1.4%)		
EBD diagnosis (ICD-10)			154.9	0.0001
Bulimia nervosa	11 (18%)	0 (0%)		
Atypical bulimia	4 (6.6%)	0 (0%)		
Unspecified EBD	46 (75.4%)	9 (6.1%)		
EBD diagnosis (DSM-IV)			151	0.001
Bulimia nervosa	14 (23%)	0 (0%)		
Unspecified EBD	47 (77.1%)	10 (6.8%)		
Suicidal ideation	16 (27.6%)	16 (11.4%)	7.9	0.005
No. suicide attempts	0.29 (SD: 0.92)	0.05 (SD: 0.25)	1.98	0.05
Sexual dysfunction	21 (51.2%)	36 (37.5%)	2.2	NS
Insomnia	32 (57.1%)	51 (38.9%)	5.3	0.02
Use of antidepressants	52 (85.2%)	50 (34%)	51.6	0.000
Use of other psychodrugs	4 (6.5%)	4 (2.7%)		

EBD: eating behavior disorder.

DISCUSSION

Obese with binge eating as differentiated clinical subtype

Presence of binge eating in the obese, even if they do not fulfill the criteria of a specific diagnosis such as bulimia or binge eating disorder, is relevant from the clinical point of view. Thus, it has been considered that abnormal eating patterns, although they are not considered mental disorders, are important for their impact on health[27]. Equally, other authors do not observe qualitative differences between patients with binge eating (subthreshold pictures) and those who fulfill diagnostic criteria of BED or BN[17]. These patients are characterized by their greater impulsiveness, low self-esteem, obsession for thinness, body dissatisfaction and presence of depressive symptoms[17,18]. The so-called core eating symptoms such as excessive concern about weight and figure are similar between patients with binge eating and patients with BN[9,28]. These data make it recommendable to include a group with the diagnosis of subthreshold BED in the studies on the subject[1], supporting the continuum between these EBD[18].

Table 3 Clinical characteristics of eating behavior

	With binge eating (n = 61)	Without binge eating (n = 149)	χ^2 or t	p
Severity of binge eating				
Mild	30 (49.2%)	0 (0%)	210.00	0.0001
Moderate	28 (45.9%)	0 (0%)		
Serious	3 (4.9%)	0 (0%)		
Vomiting				
Mild	9 (14.8%)	6 (4%)	35.01	0.0001
Moderate	9 (14.8%)	0 (0%)		
Serious	1 (1.6%)	0 (0%)		
Sedentary life				
Mild	7 (12.5 %)	19 (13.5%)	1.44	NS
Moderate	38 (67.9%)	85 (60.3%)		
Serious	6 (10.7%)	24 (17%)		
Weight/food over-concern				
Mild	21 (40.4%)	39 (29.3%)	15.69	0.001
Moderate	24 (46.2%)	40 (30.1%)		
Serious	2 (3.8%)	2 (1.5%)		
Sociofunctional limitations				
Mild	11 (20%)	22 (16.4%)	9.22	0.026
Moderate	29 (52.7%)	62 (46.3%)		
Serious	7 (12.7%)	6 (4.5%)		
In bariatric surgery program				
Yes	24 (39.3%)	121 (81.2%)	35.49	0.0001
No	37 (60.7%)	28 (18.8%)		
Age of obesity onset (years)	19.77 (SD: 12.54)	19.18 (SD: 10.78)	0.327	NS
Previous weight (kg)	67.28 (SD: 13.20)	70.55 (SD: 13.13)	1.030	NS
Maximum weight	116.95 (SD: 23.09)	121.01 (SD: 20.44)	1.207	NS
Minimum weight	77.68 (SD: 23.53)	85.45 (SD: 23.32)	1.429	NS
Present weight	111.82 (SD: 23.34)	116.90 (SD: 19.40)	1.493	NS
Current body mass index (kg/m^2)	43.22 (SD: 7.92)	45.62 (SD: 6.58)	2.077	0.05
Degree of body dissatisfaction (0: minimum; 10: maximum satisfaction)	8.77 (SD: 2.42)	7.31 (SD: 3.18)	2.892	0.005

SD: standard deviation; NS: non-significant.

We do not observe differences in the presence of concomitant medical disease, more related with the presence of obesity than with eating behavior disorder. We also do not observe any differences in family background of obesity. Family background of EBD was greater in the binge eating group, which supports a family component (genetic or environmental) in these problems. It has been stated that family eating behavior problems are a risk factor for BED[29]. There may be more psychiatric family burden in the binge eating subgroup. In any event, assessment of the psychiatric family background was based on the interview of the patient and was not verified with the evaluation of the family members.

Psychopathology in obese patients with binge eating

Patients with binge eating have greater psychopathology, fundamentally more depressive symptoms and greater presence of a comorbid diagnosis of dysthymia. The patient group with binge eating has twice the risk of being diag-

Table 4 Scale scores

	With binge eating (n = 61)	Without binge eating (n = 149)	t	p
BDI	17.14 (SD: 9.84)	12.21 (SD: 8.89)	2.654	0.01
BAI	18.69 (SD: 13.11)	14.48 (SD: 11.49)	1.736	NS
BIS	53.59 (SD: 14.38)	47.54 (SD: 11.23)	2.320	0.02
EDI-DT	12.46 (SD: 5.06)	10.41 (SD: 5.59)	1.878	NS
EDI-B	5.43 (SD: 4.63)	1.76 (SD: 2.57)	4.411	0.001
EDI-BD	19.91 (SD: 6.91)	17.71 (SD: 6.78)	1.613	NS
EDI-I	7.94 (SD: 6.11)	4.67 (SD: 4.92)	3.085	0.01
EDI-P	5.23 (SD: 3.77)	3.69 (SD: 3.58)	2.116	0.05
EDI-ID	4.06 (SD: 3.45)	3.72 (SD: 3.95)	0.440	NS
EDI-IA	7.77 (SD: 5.67)	5.16 (SD: 5.65)	2.299	0.05
EDI-MF	6.71 (SD: 4.93)	6.02 (SD: 3.94)	0.810	NS
MOCI-total	10.06 (SD: 5.37)	8.74 (SD: 4.76)	1.271	NS
BITE symptoms	17.54 (SD: 8.19)	8.68 (SD: 6.02)	5.728	0.001
BITE severity	4.26 (SD: 6.63)	3.17 (SD: 8.04)	0.697	NS
BSQ	132.06 (SD: 39.64)	111.63 (SD: 41.83)	2.381	0.05
EAT	56.11 (SD: 18.34)	61.84 (SD: 13.04)	1.698	0.06

SD: Standard deviation; BDI: Beck Depression Inventory; BAI: Beck Anxiety Inventory; BIS: Barrat Impulsiveness Scale; EDI: Eating Disorder Inventory. Subscales: drive for thinness (EDI-DT), bulimic symptoms (bulimia, EDI-B), body dissatisfaction (EDI-BD), ineffectiveness and low self-esteem (EDI-I), perfectionism (EDI-P), interpersonal distrust (EDI-ID), interoceptive awareness (EDI-IA) maturity fears (EDI-MF). MOCI: Maudsley obsessive-compulsive symptoms inventory; BITE: Bulimic Investigatory Test Edinburgh; BSQ: Body Shape Questionnaire; EAT: Eating Attitudes Test.

nosed of dysthymia, although there are no differences in the presence of other psychiatric disorders. Several studies have observed an association between obesity and presence of depressive symptoms[30-32]. The association is clearer when binge eating is present[5]. In a study on twins, the presence of binge eating was associated to that of depressive episodes[33]. In a large sample, a correlation between presence of a history of depression and diagnosis of BED was observed. Furthermore, the presence of depression was a negative predictive factor for weight loss[34]. Coaggregation of EBD, including BED, with affective disorders, was described in a family study, suggesting common family causal factors[35]. Prevalence values obtained by us for mood disorders are similar to those reported by other authors[1,4,7,13,16]. As us, other authors do not observe major prevalence of other axis I diagnoses[13]. Equally, our data of greater score on the Beck Depression Scale in the presence of binge eating coincides with most of the authors[15,36,37]. The score on this scale decreases with weight loss[38]. In agreement with these data, we observed that patients with binge eating have more problems of insomnia, more suicidal ideation and more suicide attempts. This greater risk of suicidal ideation and behaviors has already been described previously by other authors[4,5]. No statistical differences were observed between the groups regarding the presence of sexual dysfunction since this variable was collected in a small part of the sample. However, the difference was clinically relevant (51.2 % of sexual dysfunction in the binge eating group vs 37.5 % in the group without binge eating).

The patient group with binge eating also had more than twice the diagnoses of personality disorders (36.7 % vs 15.8 %). The diagnoses were heterogeneous and were classified as non-specified in a significant percentage as they did not clearly fit into a specific diagnosis. These data also agree with other studies that observe greater prevalence of personality disorders in the obese with binge eating disorder, histrionic, borderline, anancastic and personality avoidance disorders predominating[7,13,14,39].

Patients with binge eating scored higher on the Barrat Impulsiveness Scale (BIS), indicating a relationship between the presence of impulsiveness and binge eating. Furthermore, they had more diagnoses of emotional instability disorder, greater rate of suicide attempts and increased number of attempts by those attempting suicide, which supports this impulsiveness. Impulsiveness and binge eating behaviors have been associated with the presence of suicidal behaviors in patients with EBD[40]. Greater impulsiveness is an outstanding characteristic of BED[37]. For some authors, this suggests that there may be a serotonic dysfunction in this disorder[41]. It has been observed that a series of negative emotional states are the main factors that precede binge eating[42]. Thus, based on our data, we could consider that the presence of depressed mood together with greater impulsiveness would be the genesis of binge eating behaviors in obese patients, although we could not establish a causal relations due to our study's design.

There were no differences in the presence of obsessive-compulsive symptoms measured by the MOCI. However, the subjects scored higher on the perfectionism subscale of the EDI scale. Thus, the perfectionism trait and obsessive symptoms, clearly associated to anorexia nervosa, do not seem to be a distinctive characteristic of the obese with BED[43].

When we evaluated the presence of alexithymia through the clinical interview, we did not find any differences between the groups. When a questionnaire such as the Toronto Alexithymia Scale was used, we also did not find any differences[44]. Thus, alexithymia does not seem to be a relevant characteristic of patients with binge eating.

Evaluation of eating behavior in obese patients with binge eating

We observe higher scores in the binge eating subgroup in some sub-scales that assess psychopathology characteristic of eating behavior disorders: in the EDI-B, EDI-I, EDI-P, EDI-IA, BITE-symptoms and BSQ subscales. We did not observe

any clinically relevant differences between these scales according to whether there was a binge eating disorder, bulimia nervosa or only the presence of binge eating without criteria for one of the previous, except for a greater score on the BSQ scale in bulimia. With the limitations due to the small sample size of the subgroups, this would support homogeneity between these pictures and possibly the lack of clear diagnostic limits between binge eating disorder as an independent entity, bulimia or binge eating alone, supporting the continuity between both disorders.

The main differences in these scales between the two subgroups are observed, as was to be expected, in those measuring bulimic behaviors (EDI-B, BITE-symptoms). Scores on the EDI agree with those obtained in the Fassino et al. study[37] in a smaller sample, except for the fact that they observed a statistically significant difference in the DT subscale. We observed differences in this scale that did not reach statistical significance. They consider patients with criteria for BED, and thus presumably more serious. There were no differences in the body dissatisfaction subscale of the EDI, due to an elevated score of it in the group without binge eating. This indicates there is already high body dissatisfaction even among the obese without binge eating. In any event, when body dissatisfaction was evaluated in another way (1 to 10 scale), a higher score was observed in patients with binge eating, also supported by the differences in the BSQ scale. Other authors observe this elevated score in the EDI-BD subscale (body dissatisfaction) that improves with weight loss[45,46]. The authors coincide that the greater body dissatisfaction is associated with the presence of BED and not to the degree of obesity[36,46]. Thus, we observe greater dissatisfaction in spite of an inferior BMI at the time of the baseline evaluation in the binge eating subgroup. Greater body dissatisfaction has been related with low self-esteem[47]. We have detected lower self-esteem in patients with binge eating by a dichotomic variable from the clinical evaluation and it has also been equally reported by other authors in relationship with BED[11,15].

We observe that patients with binge eating have more overconcern about weight, figure and food, which are considered core symptoms of EBD. This greater concern about weight and figure is characteristic of BED[9,10,48] and should be considered according to some as a cardinal symptom in the diagnostic criteria of BED[48].

The EAT scale does not seem to help to differentiate these subgroups, possibly in relationship with the fact that its original design was to assess anorexia nervosa and its lack of capacity to differentiate between EBD types[21].

We must indicate as limitations of the study that the comorbid psychiatric diagnoses and personality disorders were not made with a structured interview, although the diagnoses of bulimia and binge eating disorder were structured. Many of the clinical variables were evaluated with the clinical interview and validated scales were not used for them. In any event, it was observed that there was agreement between variables such as impulsiveness or presence of depressive symptoms that were assessed in both ways (scale and clinical evaluation). Family background was based exclusively on the information from the patient and was not compared with the information from family members. The sample came from a psychiatry office and thus with high prevalence of psychopathology and eating behavior disorders. Thus it is possible that the results cannot be extrapolated to other samples of obese subjects (primary health care clinics, endocrinology or general population).

Although it is not possible to rule out or support the existence of binge eating disorder as a different nosological entity with our data, as has been suggested in the DSM-IV nomenclature or by other authors[8], our impression is that there are limited clinical differences with bulimia in obese patients and that the current research criteria seem to be quite strict and exclude a subgroup of patients with binge eating who may also have limited clinical and possibly evolutive differences with those who fulfill binge eating disorder criteria. Thus, the presence of binge eating in obese patients must be considered clinically relevant. This is because of its differential characteristics and the possible need for a different therapeutic approach. Thus, morbidly obese subjects with binge eating form a possibly homogeneous group (independently of the diagnosis of present eating behavior disorder). They are differentiated from the rest of the morbid obese subjects due to the existence of major psychopathology, fundamentally affective, greater impulsiveness and greater severity in the scales that evaluated eating behavior and body dissatisfaction. These patients have lower self-esteem and greater concern about weight and food, even though they do not have more severe obesity. Therefore, the presence of psychopathology and of eating behavior disorders must be assessed in all severely obese subjects. More studies that identify the most adequate therapeutic approaches for these patients and evaluate the prognostic relevance of these alterations are necessary.

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