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Original Research Article

ALEXITHYMIA COULD MASK DEPRESSION IN OBESE PATIENTS

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Abstract:

Objective:- This study aimed to evaluate the relationship between obesity, alexithymia (primary and secondary) and depression in a sample of obese outpatients.**Methods:** Among the patients referred to the outpatients' clinic for obesity in a University Hospital, we consecutively enrolled 100 overweight/obese (BMI > 27 kg/m^2) subjects (35 males and 65 females) over a period of 20 months. Socio-demographic and clinical data were collected; all patients underwent the Toronto Alexithymia Scale (TAS-20) and the Center for Epidemiological Studies Depression Scale (CES-D) in order to measure alexithymia and depression. **Results:** The prevalence of alexithymia was 18% (25% including borderline values). TAS-20 mean score was 49.17 ± 12.38. Considering CES-D scores, 33% of the sample was possibly or probably depressed. CES-D score was significantly correlated to TAS-20 score ($r = 0.393$, $p < 0.001$), in particular with DIF ($r = 0.524$, $p < 0.001$) and DDF ($r = 0.204$, $p < 0.05$) subscales. BMI was not associated with alexithymia nor with depression. **Conclusion:** Obesity determines a vulnerability in developing depression, therefore alexithymia in obese depressed patients could be an adaptive response (secondary alexithymia). Moreover alexithymia could lead the subjects to an underestimation of depression and to not seek a correct treatment.From our results, the multidisciplinary approach in treating obese subjects should include the evaluation of emotional aspects whose diagnosis can influence the course of treatment.

Keywords: Alexithymia; Depression; Obesity.

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Introduction

Alexithymia, "no words for emotions" [1], is an affective-cognitive construct characterized by difficulties in identifying and conveying emotions and distinguishing between feelings and bodily or visceral emotions. It is also characterized by a concrete and externally oriented cognitive style [2, 3].

Alexithymia was originally described as a psychodynamic structural construct among psychosomatic patients. Some authors proposed possible relationships between affect regulation and early life relationships [3]. It was afterwards developed as an emotional trait that can be retrieved in several illnesses, both medical (i.e. hypertension, rheumatic and dermatologic diseases) and psychiatric (i.e. eating and somatoform disorders and anxious depressive syndrome). Nowadays alexithymia is considered a transnosographic clinical dimension existing along a continuum from normal to pathological [4].

Some authors [3,5] agree to differentiate *primary alexithymia*, considered a trait inherent to personality and more frequent in psychosomatic diseases, from *secondary alexithymia*, a transient state that arises from acute illness and other stressful experiences or as an adaptive response to a chronic disease.

Alexithymia affects the psychological well-being of patients influencing negative habits, the size of personal social network, health behaviours, the pattern of use of health services and the response to drug treatments and psychotherapy [6].

Several studies investigated the presence of alexithymic symptoms in obesity, with conflicting results: some studies found a greater prevalence of alexithymia in obese subjects compared with lean controls [7, 8, 9], others described a higher prevalence of alexithymia in obese patients with specific psychological traits [10, 11, 12, 13], others did not find any correlation between obesity and alexithymia [14]. A recent study evaluated the alexithymic construct in a group of severe obese patients, finding that they have more difficulties in recognizing emotions and have more depressive symptoms than control subjects [15]. A clear association between alexithymia and depressive symptoms was found in patients with depressed mood and negative body image [16, 17].

Aim of the study

Our study aims to evaluate the association between alexithymia, depression and obesity in a sample of obese outpatients. Moreover we would like to differentiate between primary and secondary alexithymia (which may indicate the presence of a specific psychiatric disease) in order to identify the subjects who may need a specific specialist treatment.

Methods

Study design and sample

Among the patients referred for the first time to the outpatients' clinic for obesity in a University Hospital, we operated a naturalistic sampling over a period of 20 months in which we consecutively enrolled 100 subjects (35 males and 65 females), aged 18 or over and with a body mass index (BMI) greater than 27 kg/m^2.The study was approved by the Ethical Committee of the Hospital and all the subjects gave their informed consent, agreeing to undergo the psychometric assessment.

Data collection

We collected socio-demographic data (sex, age, educational level, civil status and nationality) medical history and anthropometric data (BMI, weight). After the medical examination, all the patients completed the following self-administered and widely used rating scales:

- Toronto Alexithymia Scale - TAS-20 [18]

The Italian validated version of the TAS-20 [19] was used to measure alexithymia. This scale has a three-factor structure which reflects the three main facets of the alexithymic construct: difficulty Identifying Feelings Subscale (DIF), i.e. "I have feelings that I cannot quite identify"; difficulty Describing Feelings Subscale (DDF), i.e. "It is difficult for me to find the right words for my feelings"; externally-Oriented Thinking Subscale (EOT), i.e. "I prefer talking to people about their daily activities, rather than their feelings".

Each item is rated on a five-point Likert scale ranging from 1 (strongly disagree) to 5 (strongly agree). The cut-off scores are: equal to or less than 50 = non alexithymia, from 51 to 60 = possible alexithymia, equal to or greater than 61 = alexithymia.

- Center for Epidemiological Studies Depression Scale - CES-D [20]

This test, validated in Italian language by Fava G. A. [21] and particularly used in psychosomatic diseases, determines the subject's depression quotient throughout the investigation of major depressive symptoms: depressed mood, feelings of guilt and worthlessness, feelings of helplessness and hopelessness, psychomotor retardation, loss of appetite and sleep disturbance. The twenty-item CES-D assesses the occurrence frequency of symptoms during the past week on a 0–3 Likert-type scale ("rarely or none of the time" to "most or all of the time"). The possible range of scores is 0 to 60; standard cut-offs are ≥ 16 for possible depression and ≥ 23 for probable depression.

We decided to use these two scales in order to evaluate if alexithymia could be dependent from obesity itself or if it is a consequence of depressive symptoms, since a variety of previous studies had already demonstrated an association between obesity and depression [22].

Statistical Analysis

After data collection, we created a database including all socio-demographic variables, clinical data, total and partial scores of the rating scales. Means and standard deviations were calculated for continuous variables. Student's t-test was used to compare means. Pearson's linear coefficient was used to evaluate linear correlations between variables. A p value <0.05 was considered statistically significant.The statistical analysis was performed using IBM SPSS Statistics ver.19.

Results

Socio-demographic data are summarized in *Table I*.

Age (Years)	Mean (SD)	54.4 (12.6)
Gender	Male (%)	35 (35%)
	Female (%)	65 (65%)
Educational achievement	Illiterate/Primary school (%)	27 (27%)
	Junior high school (%)	36 (36%)
	High secondaryschool (%)	27 (27%)
	Graduated (%)	10 (10.0%)
Marital status	Married/cohabiting (%)	77 (77 %)
	Unmarried (%)	11 (12.1%)
	Divorced (%)	6 (6%)
	Widowed (%)	6 (6%)
Educational achievement	Employed (%)	48 (48%)
	Unemployed (%)	10 (10%)
	Retired (%)	35 (35%)
	Student (%)	1 (1%)
	Invalid (%)	6 (6%)

Table 1. Demographic and clinical characteristic of participants

On the basis of TAS-20 scores, 18% of the patients was alexithymic, 25% borderline and 57% not alexithymic. The mean TAS-20 score was 49.17 ± 12.38 and the women achieve a higher value than the man does (*Table II*). The mean scores of the subscales were: DIF 15.77 ± 5.96, DDF 13.36 ± 5.11, EOT 20.24 ± 6.35.

Considering CES-D scores, 33% of the sample was possibly or probably depressed (total score ≥ 16). CES-D mean score was 13.80 ± 10.10.

None of the socio-demographic data was associated with alexithymia, except educational level which was negatively correlated to TAS-20 scores ($r = -0.350$, $p < 0.001$).

The BMI in the sample (mean 34.9 ± 6.7 $kg/m^{2)}$ did not correlate with depressive (CES-D score $r = -0.009$, ns) or alexithymic symptoms (TAS-20 score $r = 0.027$, ns).

The presence of alexithymia (TAS-20 scores) was significantly correlated ($r = 0.393$, $p < 0.001$) to depression (CES-D scores) *(Table II)*.CES-D items which better correlate ($p \leq 0.001$) to the alexithymic state belong to "depressed mood" area (items 13, 15, 16, 17, 18, 19, 20).

Therefore, we evaluated the association between CES-D and the subscales of TAS-20. We found a significant association between CES-D and DIF scores ($r = 0.524$, $p < 0.001$) and DDF ($r = 0.204$, $p < 0.05$).

Regarding the prevalence of medical pathologies, we found out that 69% of the sample suffers from hypertension, 35% from dyslipidemia, 21% from thyroid diseases, 18% from diabetes mellitus and 12% from obstructive sleep apnea syndrome. Taking into account that some studies describe a relationship between hypertension and alexithymia [23, 24, 25], we evaluated this issue in our patients. The prevalence of hypertension was high, but the scores for alexithymia and depression were not significantly different between subjects with or without hypertension (respectively $t = -0.535$, ns; and $t = 0.251$, ns). All the hypertensive patients in our sample were treated with antihypertensive drugs and we found a significant negative correlation between TAS-20 scores and the number of antihypertensive medications taken ($r = -0.201$, $p < 0.005$).

Gender	TAS-20 means	CES-D means	Pearson Correlation Coefficient	*P*-value
Men	46.86±11.87	8.43±9.59	r =0.349	0.040
Women	50.42±12.56	16.69±9.21	r=0.384	0.002
Total	49.17±12.38	13.80±10.10	r=0.393	<0.001

Table II. Mean values (±SD) of CES-D (Center for Epidemiological Studies Depression Scale) and TAS-20 (Toronto Alexithymia Scale) scores and correlations coefficients between CES-D and TAS-20 values in men and women.

Discussion

Using the TAS-20, in our obese patients the prevalence of alexithymia was 18% and 25% including "borderline" patients. In this regard we have to underline that in the study for the Italian validation of the Toronto Alexithymia Scale there is no clear guidance on how to use data of patients falling in the range "score indeterminate" between > 50 and <61.

The prevalence of alexithymia found in our study group is slightly higher than the prevalence in the general population (9-17% for men and 5-10% for women) [26,27],while it is lower than the values found in patients with eating disorders (anorexia, bulimia and binge eating disorder) in which the prevalence varies from 35% to 80% [28,29,30].

Moreover, mean value of TAS-20 (49.17±12.38) resulted to be higher than mean

values found in other population-based studies [27, 31, 32] and women achieved an overall higher score comparing to men, differing from previous evidence.

We confirmed the well-known negative association between alexithymia and years of education [15, 18, 27, 33]. The cross-sectional nature of these studies, however, does not allow to determine whether alexithymia is a factor that hinders the learning, or if, on the contrary, is the education to be a protective factor giving to the subject the most valuable tools for the verbalization of emotions.

The association between alexithymia and depression is due to the fact that depressed obese patients achieved values of TAS-20 which lie in the alexithymic range. Although TAS-20 does not distinguish between primary and secondary alexithymia, this found seems to suggest that in our sample alexithymia is a consequence from depression and not from obesity.

On the contrary, no significant relationship between BMI, a direct measurement of the severity of obesity, and alexithymia / depression was found. These results seem to suggest that the greater or lesser severity of obesity affects neither alexithymia nor depressive symptoms.

Considering that obesity is not included in international classifications of mental disorders as a psychopathological condition, our results suggest that obesity does not imply a neuropsychological alteration (primary alexithymia), while it increases vulnerability in developing certain types of affective disorders [34, 35, 36]. Moreover, the psychodynamic model of depression, mainly based on the inability to overcome the destructive anguish towards positive objects, is different from that of primary alexithymia that is an arrest at, or regression to, a pre-conceptual (sensorimotor) level of emotion organization. We can therefore assume that, in our sample of obese patients, alexithymia belongs to the secondary subtype and that it is probably a symptom of the underlying depressive disorder.

The correlation between elevated scores of CES-D and TAS-20 DIF-DDF scores is in line with previous existing data, reporting an association between the emotional component of alexithymia (difficulty in identifying and describing feelings) and depressive disorder (especially somatic symptoms). On the contrary, the cognitive component (externally oriented thinking) has no connection with depressive symptoms [31, 37]. The inability to identify and describe affective states in depressed patients with a tendency to somatization may determine the susceptibility to feel somatic uneasiness, which is attributed to obesity. Moreover, considering some items of the TAS-20, we found that they are more related to psychomotor inhibition than to the subject's feeling of motor impairment.

The higher risk of developing depression in severe obese patients suggests that the consequences of a chronic illness such as obesity could determine mood fluctuations; on the contrary, alexithymia is influenced by depression and not by obesity itself, as noted above.

Conclusions

The study showed a significant association between depression and secondary alexithymia in a sample of obese outpatients and no association with the gravity of obesity.Moreover, alexithymic traits, particularly the difficulty in identifying and describing feelings, lead the subjects to an underestimation of depression and in the end to not seek medical help. In this population an intervention aimed at reducing depressive symptoms, subjectively not perceived could foster an increase in the ability to elaborate emotions, improving the patient's overall well-being.

Therefore, the consultation-liaison psychiatric support in a clinical Centre for Obesity can be useful in the treatment of depressive disorders in obese patients; psychotherapeutic intervention may also promote a better compliance with dietetic prescriptions.

Finally, a screening (both dietetic and psychiatric) carried out before the treatment of obesity might be useful to tailor the therapy to the individual characteristics of each patient.

These initial findings confirm the importance of a multidisciplinary approach in the treatment of obese patients, considering that the emotional aspects (i.e. depressive and alexithymic traits) can influence the course of treatment and may result in an improvement of the quality of life. Such patients often respond poorly to standard medical treatments and cause an increasing cost to the health care system, as their symptoms become chronic in nature. They usually are not good candidates for traditional insight-oriented psychotherapies and require modified treatment approaches.

Conflict of Interests

None.

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