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Нервная анорексия и нервная булимия: неужели болезни-антиподы?

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АННОТАЦИЯ

Нервная анорексия и нервная булимия представляют основные формы расстройств пищевого поведения и характеризуются как явным сходством, так и определёнными различиями между собой. Общность двух расстройств определяется преимущественным возникновением у женщин подросткового и молодого возраста, ухудшением физического здоровья, значительной психиатрической коморбидностью и высоким суицидальным риском. Основным направлением помощи как при нервной анорексии, так и при нервной булимии служит психотерапия. В то же время, в отличие от нервной анорексии, нервная булимия предполагает применение фармакологических средств с доказанной клинической эффективностью. Пациенты с нервной булимией демонстрируют более выраженную мотивацию к лечению и более высокую приверженность терапии.

Ключевые слова: *расстройства пищевого поведения, нервная анорексия, нервная булимия, дети и подростки, когнитивно-поведенческая терапия, семейная психотерапия, антипсихотики второго поколения, оланзапин, селективные ингибиторы обратного захвата серотонина, флуоксетин*.

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Anorexia nervosa and bulimia nervosa: are these diseases really antipodes?

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ABSTRACT

Anorexia nervosa and bulimia nervosa are the main forms of eating disorders that characterized by both obvious similarities and certain differences between each other. The commonality of the two disorders is determined by the predominant occurrence in adolescent and young women, deterioration of physical health, significant psychiatric comorbidity and high suicidal risk. Psychotherapy is the principal treatment for both anorexia nervosa and bulimia nervosa. At the same time, unlike anorexia nervosa, the pharmacological agents with proven clinical efficacy for the treatment of bulimia nervosa exist. Patients with bulimia nervosa are more motivated and adherent to treatment.

Keywords: *eating disorders, anorexia nervosa, bulimia nervosa, children and adolescents, cognitive behavioral therapy, family-based treatment, second-generation antipsychotics, olanzapine, selective serotonin reuptake inhibitors, fluoxetine*.

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Eating disorders are common among mental disorders, forming comorbidities with many of them, and represent an important problem in psychiatry and clinical medicine in general.

According to the taxonomy of the Diagnostic and Statistical Manual of Mental Disorders, 5th edition (DSM-5[1]), eating disorders are classified into various types (Table 1).

Anorexia nervosa and bulimia nervosa are the most common types of eating disorders. They differ in many ways, representing almost opposite phenomena, but are linked by some related behavioral aspects and clinical manifestations.

Anorexia nervosa is characterized by a distorted image of one's own body and painful fears associated with the possibility of obesity or the belief that one's own body is overweight when it is underweight.

Most often, the desire to lose weight is associated with the idea of an ideally thin body, demonstrating the perfectionism that characterizes many people predisposed to anorexia.

Anorexia nervosa is classified into two types [1, 2]:

1. Restrictive type: restriction of food intake up to fasting, with possible intensive physical training; no episodes of overeating or purging in the previous three months.

Table 1. Taxonomy of eating disorders

Anorexia nervosa
Bulimia nervosa
Binge eating disorder
Avoidant/restrictive food intake disorder
Pica
Rumination disorder

The commonality of anorexia nervosa and bulimia nervosa is determined by the predominant occurrence in adolescent girls and young women and a much rarer development in boys and men, an unfavorable and, in some cases, extremely adverse effect on physical health, a pronounced suicidal risk, which, along with the deterioration of physical health, underlies the high mortality rate of patients, particularly for a psychiatric clinic.

ANOREXIA NERVOSA

The disorder is characterized by a sharp restriction of food intake caused by the constant desire for optimum thinness.

Restricting food intake causes a large, and in some cases critical, loss of body weight, leading to cachexia, which causes hormonal changes and other manifestations of a severe deterioration of physical health.

Notably, the term "anorexia" is inaccurate because most patients who have not reached the stage of cachexia retain their appetite.

2. Binge eating/purging type: there have been repeated episodes of binge eating or purging over the last three months, achieved by self-induced vomiting or laxatives, diuretics, or enemas.

The disorder most often develops in adolescent girls and young women. Although cases have been described with onset at 8 yr of age and slightly older ages, the peak incidence occurs at 15–19 yr of age (16–17 yr of age in girls and an average of 12 yr in boys). Boys are more likely than girls to have an early onset [3].

Anorexia nervosa is characterized by severe psychiatric comorbidity. Depression, anxiety, and substance abuse are the most prevalent comorbid disorders.

The etiology of anorexia nervosa is unknown. Excessive weight and diet play a role in assessing the risk of developing the disorder.

[1]The March 2022 revision of DSM-5-TR includes changes in the diagnostic criteria for avoidant/restrictive food intake disorder but not the taxonomy of eating disorders as a whole.

Due to negative attitudes toward excess weight and the desire to be thin, the disease most often develops in countries of Western culture and Westernized social strata of non-European countries, such as Japan.

It has been reported that more than half of prepubertal girls in the United States are dieting or adopting other weight-control measures [2].

Many patients with anorexia nervosa are from the middle or higher socioeconomic class, are prone to pedantry and compulsiveness, have average mental capacity, and aim for extremely high levels of performance and success [2].

People with anorexia nervosa are preoccupied with nutritional issues; they often place significance on diets and calories and collect recipes. Some patients prepare delicious meals and entertain others with them but do not consume them. Perhaps this serves as a measure of psychological compensation[2].

In most cases, patients covertly throw away food, conceal malnutrition or fasting, and deliberately induce vomiting and other weight loss measures. Simultaneously, they often assure others that they have just eaten, even when they have not, or exaggerate the amount of food ingested.

Despite severe weight loss and cachexia, some patients maintain high physical activity levels, including intense exercise.

Anorexia nervosa has an exceptionally high (up to 10%–15%) mortality rate due to malnutrition, deterioration of physical health, and exhaustion. As a result, without exaggeration, it can be considered one of the most dangerous mental disorders.

It is believed that two-thirds of patient deaths are due to physical causes and one-third by suicide [3]. The mortality rate in patients with anorexia nervosa is 5–10 times higher than in the general population, with suicide being one of the leading causes of death.

According to Mereu et al. (2022), who monitored 100 adolescents with anorexia nervosa and included suicidal thoughts (24%), cutting off extremities (19%), and attempted suicides (6%), suicidality was recorded in 27% of patients. Suicidal tendencies are associated with comorbid mental disorders, primarily depression [4].

Medical and psychological care for anorexia nervosa is complicated by patients' lack of candor and reluctance to gain weight. Patients typically inflate the volume and calorie content of their diet, conceal starvation, and deliberately induce vomiting and other manifestations of their disorder.

There are two types of therapeutic measures for anorexia nervosa:

1. life-saving therapeutic nutrition aimed at metabolic correction and maintaining body weight not lower than a critical minimum and

2. treatment of anorexia nervosa itself as a mental disorder.

Calcium and vitamin D are supplemented in the food products to enhance the nutritional management system.

Despite numerous studies aimed at developing approaches to effective pharmacological treatment for anorexia nervosa, none of the drugs studied showed a statistically significant advantage over placebo.

Olanzapine in doses of up to 10 mg is one way to overcome weight loss [2]. As is well known, olanzapine, like other antipsychotics, particularly second-generation drugs, can cause weight gain.

However, many patients avoid taking these medications because they interfere with their ability to control and maintain their desired low weight.

Concerns underlying patients' negative attitudes toward therapy may even be related to the dietary calories contained in the coating of oral dosage forms [5].

The authors of this article believe that using a drug's side effects (in this case, weight gain under the influence of antipsychotics) as a desired clinical effect can hardly be considered ethically irreproachable.

In addition, weight gain caused by antipsychotic therapy is likely accompanied by other metabolic changes, such as insulin resistance, increased blood glucose levels, and lipid abnormalities.

The use of psychotropic drugs, primarily antipsychotic agents, is limited by their side effects, which include the tendency to prolong the *QT* interval, which may already be prolonged in patients with anorexia nervosa due to fluid and electrolyte imbalances caused by eating disorders.

[2] Similar behavior is possible in remission of alcohol addiction, when patients willingly pour alcohol in company, but do not drink it themselves.

Pharmacological therapy for anorexia nervosa is mostly symptomatic and focuses on comorbid mental disorders, primarily depression and anxiety [6].

The primary treatment for anorexia nervosa is psychotherapy.

The UK National Institute for Health and Clinical Excellence[3] prescribes psychological therapies to treat anorexia nervosa and emphasizes that specific pharmacological therapy is not advised [7].

The first-line psychotherapy treatment for adult patients is cognitive behavioral therapy. Family-based treatment is highly valued when treating children and adolescents.

Canadian practice guidelines for treating eating disorders in children and adolescents strongly recommend family psychotherapy as the primary method of care. The efficiency of other forms of psychological support, including multifamily therapy, cognitive behavioral therapy, and adolescent-focused psychotherapy, is reported to be ineffective [8].

According to Kaye and Bulik (2021), anorexia nervosa is a debilitating, often fatal, and highly expensive disease that costs the United States more than $65 billion annually and affects one in every five patients.

The authors reported a high (up to 50%) relapse rate and a standardized mortality ratio of 6. Therefore, anorexia nervosa is classified as a mental disorder with the highest mortality rate.

It is emphasized that, despite unconditional scientific achievements in the study of eating disorders, effective biological treatments for anorexia nervosa have yet to be found, and there is no single FDA-approved treatment method[4] for this purpose. Some empirically supported treatment methods, such as family therapy, have only moderate results.

The authors declare a crisis in the system of care for patients with anorexia nervosa in the United States by the very title of their article ("Treatment of Patients with Anorexia Nervosa in the US — A Crisis in Care") and substantiate their judgment by the lack of effective therapeutic protocols, filling the naturally occurring vacuum with unproven treatment approaches, reductions and termination of many academic care programs, referral of insured patients to private programs, and limited access to treatment for patients without health insurance [9].

It is evident that the unsatisfactory state of the care system for patients with anorexia nervosa in the American healthcare system, noted by the authors of the cited article, is global and extends to all regions of the world.

BULIMIA NERVOSA

A typical manifestation of bulimia nervosa is episodes of rapid and uncontrolled consumption of high-calorie foods (typically fatty and sweet foods) in proportions significantly exceeding the average volumes under normal conditions. The disorder is diagnosed when overeating occurs on average at least once a week for 3 months [1, 10].

Episodes of overeating are typically followed by compensatory behavior aimed at "purging" the body with spontaneous vomiting, laxatives or diuretics, fasting, or intense physical activity.

A characteristic psychological feature of patients with bulimia nervosa is preoccupation with one's appearance and body weight. Patients with bulimia are typically of normal weight, with only a few being overweight[5].

Bulimia nervosa is more common in women and most often in adolescence, with the onset of apparent manifestations during early adulthood.

Bulimia nervosa, like anorexia nervosa, is associated with a significant risk of suicide, particularly in adolescents.

Moreover, according to a meta-analysis by Mandelli et al. (2019), the frequency of suicide attempts is higher in patients with bulimia nervosa (21%) than in patients with anorexia nervosa; however, the authors acknowledge the heterogeneity of the data used in the analysis and emphasize that the statistically significant difference only applies to restricted types of anorexia (9%–10%) [11].

The prevalence of suicidal ideation is higher in adolescent patients than adults, and bulimia is associated with increased suicidality.

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[3]In 2012, the institution was renamed National Institute for Health and Care Excellence.

[4]FDA (Food and Drug Administration) is a USA federal agency that controls the production, storage, and sale of food products, drugs, and cosmetics.

[5]This is one of the differences between bulimia nervosa and binge eating disorder.

Suicidal ideation occurred in 53% of adolescents with bulimia nervosa compared with 34.4% of adolescents with binge eating disorder, 21.3% of adolescents with other mental disorders, and 3.8% of respondents without mental disorders [12].

Patients with bulimia nervosa often have comorbid mood disorders, anxiety, and alcohol and other substance use disorders.

Bulimia nervosa is associated with the possibility of deterioration in physical health, although not to the same extent as in patients with anorexia nervosa. First, bulimia nervosa contributes to cardiovascular diseases, such as atherosclerosis, coronary heart disease, acute myocardial infarction, cardiomyopathy, and conduction disorders [13].

Cases of benign cardiomyopathy (particularly in two women aged 21 and 24 yr) have been reported in association with the use of ipecacuanha sold over-the-counter in pharmacies as an inducer of vomiting [14].

Cardiac and vascular diseases, along with suicide, are among the leading causes of mortality among patients with bulimia nervosa.

As with anorexia nervosa, psychotherapy is the primary treatment for bulimia nervosa, and pharmacological treatment is considered an addition to psychotherapy or an alternative approach when psychotherapeutic care is ineffective or unavailable [15].

Psychotherapy for adult patients with anorexia nervosa includes cognitive behavioral therapy and, as a second-line method, interpersonal therapy. In addition, specific perspectives are associated with dialectical behavior therapy and integrative cognitive–affective therapy. Family psychotherapy and cognitive behavioral therapy have proven effective in treating bulimia nervosa in adolescents [15].

At the same time, unlike anorexia nervosa, pharmacological agents with proven clinical effectiveness can be used to treat bulimia nervosa.

Selective serotonin reuptake inhibitors (SSRIs) are considered first-line pharmacological agents for bulimia nervosa in adult patients.

Suppose different SSRIs are used to treat monopolar depression or anxiety disorders. In that case, the drug of choice among antidepressants in this group for bulimia nervosa is fluoxetine, which can reduce appetite to a greater extent than other SSRIs. Furthermore, unlike many other antidepressants, fluoxetine rarely increases body weight.

It should be noted that fluoxetine is used to treat depression in doses of 20–40 mg; however, the adequate amount for bulimia nervosa is 60 mg.

Approaches to treating bulimia nervosa in adolescents have been inadequately developed, although fluoxetine at a dose of 60 mg is also considered the most promising pharmacological therapy [15].

Along with antidepressants, anticonvulsants (topiramate), stimulants, and other treatments for attention deficit hyperactivity disorder (including phentermine, often prescribed in combination with topiramate, and lisdexamfetamine[6]), opioid receptor antagonists (naltrexone and intranasal naloxone), as well as drugs intended for weight loss (metformin, liraglutide, and semaglutide), can be used in the treatment of bulimia nervosa.

Bulimia nervosa is treated with the α-adrenergic blocker prazosin, the estrogen–progestogen drug drospirenone + ethinyl estradiol, and the listed medications.

Certain expectations are also associated with using nociceptin receptor antagonists, the selective serotonin 5-HT_{2C} receptor agonist lorcaserin, and selective antagonists of type 1 orexin receptors [16].

Comprehensive treatment of bulimia nervosa includes the treatment of comorbid mental disorders and dietary changes.

ANOREXIA NERVOSA AND BULIMIA NERVOSA: SIMILARITIES AND DIFFERENCES

The two primary forms of eating disorders are characterized by specific differences.

Many patients with bulimia nervosa seek help and often demonstrate motivation for recovery and adherence to therapy, whereas patients with anorexia nervosa are rarely sincere, exaggerate the amount and caloric content of food intake, and avoid interventions that allow weight gain.

Based on the differences in Table 2, we believe that anorexia nervosa and bulimia nervosa can be considered antipodes to some extent.

At the same time, as already mentioned at the

Table 2. Differences between anorexia nervosa and bulimia nervosa

Two types of eating disorders	Anorexia nervosa	Bulimia nervosa
Body weight	Reduced, often to a significant extent	Within the normal range in most patients and increased in a few of them
Pharmacological therapy with proven efficiency	No	Yes
Seeking help	Often absent	Often sufficient
Adherence to therapy	Low or absent	Moderate or high
Patient frankness	Nontypical	Often sufficient
Prognosis	Often unfavorable	Varies from favorable to unfavorable

beginning of the article, anorexia nervosa and bulimia nervosa are quite similar in many aspects.

Anorexia nervosa type 2 is characterized by episodes of overeating and subsequent compensatory behavior ("purging" and excessive exercise) comparable with bulimia nervosa (as well as another form of eating disorder not discussed here, binge eating disorder).

Both anorexia and bulimia are psychologically associated with a pronounced preoccupation with one's weight and body shape.

Patients in both categories value nutrition highly, which is not typical for people without eating disorders.

As mentioned above, these disorders predominantly develop in adolescent girls and young women.

Both anorexia nervosa and bulimia nervosa are characterized by high psychiatric comorbidity and are primarily associated with anxiety, mood disorders, and personality disorders.

A borderline personality disorder is distinct from anorexia and bulimia in that personality disorder symptoms, as assessed based on a structured interview, correlate more with a diagnosis of bulimia nervosa than with anorexia nervosa. Bulimia nervosa is significantly more correlated with impulsivity than anorexia nervosa; instability of emotions, mood swings, and outbursts of anger are characteristic of bulimia rather than anorexia, whereas identity disturbance is more associated with anorexia nervosa [17, 18].

Both disorders have apparent similarities to addictions and are often accompanied by abuse of alcohol and other psychoactive substances.

The etiopathogenesis of both anorexia nervosa and bulimia nervosa is associated with the functioning of the cerebral reward system[7], as confirmed by neuroimaging studies, and the difference in this context is that eating less food is perceived as a reward in anorexia nervosa, whereas consuming large amounts of food during binge eating episodes in bulimia nervosa helps cope with unpleasant emotional experiences [19].

Overeating, like substance use, may be considered an inappropriate coping strategy for people experiencing psychological difficulties and mental disorders. This helps to explain the psychiatric and addictive comorbidity in patients with eating disorders.

Patients with bulimia nervosa strive to conceal their binge eating episodes, much as patients with anorexia nervosa try to conceal their undereating and other weight loss behaviors.

The presence of one or the other of the primary types of eating disorders may be suggested by common external signs associated with induced vomiting, particularly Russell's syndrome (calluses on the knuckles) and tooth enamel loss [20].

Existing scientific data and ideas suggest that the most promising directions for searching for new

[7]The reward system is believed to play a key role in formation of substance dependence and non-chemical addictions.

pharmacological therapy may also be common to anorexia and bulimia.

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