



Schematic Brief Outline: Bulimia Nervosa and its Medical-Based Management

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Authors' contributions

This work was carried out in collaboration among all authors. All authors read and approved the final manuscript.

Article Information

DOI: <https://doi.org/10.9734/indj/2024/v21i4442>

Open Peer Review History:

This journal follows the Advanced Open Peer Review policy. Identity of the Reviewers, Editor(s) and additional Reviewers, peer review comments, different versions of the manuscript, comments of the editors, etc are available here: <https://www.sdiarticle5.com/review-history/117057>

Minireview Article

Received: 21/03/2024

Accepted: 25/05/2024

Published: 30/05/2024

ABSTRACT

The disease known as bulimia nervosa, which is typified by purging and binge eating, usually starts in adolescence and peaks at the age of 18. The ratio of female to male patients varies from 10:1 to 20:1, with a lifetime frequency of 3 per cent. The majority of bulimic individuals also suffer from other mental illnesses, such as depression or anxiety. Additionally, there is a correlation between substance misuse and promiscuity. Bulimia nervosa was initially identified as a "chronic phase of anorexia nervosa" in 1979 by British psychiatrist Gerald Russell. During this stage, patients overeat and resort to compensatory methods such as self-induced vomiting, laxatives, or extended periods of deprivation. For three

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Cite as: Srivastav , Yash, Mohd Faijan Mansoori, Aditya Srivastav, and Aniket Kumar. 2024. "Schematic Brief Outline: Bulimia Nervosa and Its Medical-Based Management". *International Neuropsychiatric Disease Journal* 21 (4):61-65. <https://doi.org/10.9734/indj/2024/v21i4442>.

months, bingeing and purging episodes occurring at least once a week are typically associated with a bulimia diagnosis. However, even infrequent binge and purge behaviours can be harmful and require medical attention. The severity of the bulimia increases with the frequency of the bouts. Family therapy and individual treatment are frequently used to treat bulimia. The goal is to address any dietary issues and modify your behaviour. The relationship between your thoughts, feelings, and behaviours is examined in therapy. We go over the aetiology, epidemiology, current treatment, and state of bulimia nervosa in this review study.

Keywords: Bulimia nervosa; epidemiology; diagnosis; current treatment.

1. INTRODUCTION

The overall incidence rate of bulimia nervosa has decreased over time. Anorexia nervosa may have lifetime prevalence rates of up to 4% in females and 0.3% in males. About 1% of men and up to 3% of women will experience bulimia nervosa at some point in their lives [1]. One of the most prevalent eating disorders is bulimia nervosa. The illness presents as episodes of binge eating, coupled with attempts to eliminate the food consumed by vomiting, using laxatives, exercising, or consuming less food and calories during subsequent meals. Excessive worries about looks and weight are also common symptoms. In Western society, the condition is more prevalent in women, particularly in younger age groups (typically starting in late adolescence). The disease's onset is impacted by both environmental and biological causes. Hypokalemia and arrhythmias can arise from the use of laxatives; enamel damage and voice abnormalities can result from vomiting. A diagnosis of bulimia nervosa is made if, within the last three months, the patient experienced at least one episode of binge eating each week, followed by compensatory behaviours such as laxative use, exercise, vomiting, or cutting back on food and calories during other meals. Psychotherapy is the first line of treatment; if it is ineffective or the patient is also diagnosed with depression, SSRI or SNRI medication may be given. Eighty per cent of individuals who receive treatment experience a remission that seriously disrupts a person's eating habits. Binge eating—uncontrollably excessive periods of food—is one of its hallmarks. Next comes self-induced vomiting, abusing laxatives, and other means of purging [2]. Globally, eating disorders (EDs) are linked to a high death rate among different psychiatric diseases, a heavy load on patients, significant clinical comorbidity, and a major impact on the quality of life of patients and their families. Although young ladies have historically

been identified as the primary victims of these diseases, a minority of male patients have also been identified in recent years as having ED symptoms. One of the main contributing factors to the pathophysiology of ED has been identified as the overvaluation of slimness, which is prevalent in the West. Urbanization and globalization are emerging tendencies that have led to cultural changes that have caused these illnesses to slowly spread to India. Different symptoms can be behavioural, emotional, or physical. Bulimia may result from a mix of learned behaviours and hereditary factors; the precise cause is uncertain [3]. Gerald Russell, a British psychiatrist, initially identified bulimia nervosa in 1979 as a "chronic phase of anorexia nervosa" in which individuals gorge and then resort to compensatory behaviours including self-induced vomiting, laxatives, or extended fasts. The 2013 release of the DSM-5 marked another advancement in the categorization of bulimia nervosa. This article reviews the medical problems and psychological comorbidities associated with bulimia nervosa as well as its epidemiology and risk factors [4]. The assessment of a patient suspected of having bulimia nervosa is discussed, with a focus on getting a full and detailed history and identifying any coexisting conditions. To address the patient's physical, psychological, and social needs, management of the patient entails both behavioural counselling and medicinal measures. Bulimia typically manifests at the age of eighteen, with a 0.3% prevalence rate worldwide. Gender-specific statistics show that 1.5% of women and 0.5% of males acquire bulimia, which is five times more common in women. Certain antidepressants have been shown to lessen bulimia symptoms. The U.S. Food and Drug Administration (FDA) has approved fluoxetine (Prozac) as the only antidepressant, especially for the treatment of bulimia. This medication is referred to as an SSRI or selective serotonin reuptake inhibitor [5].



Fig. 1. Self vomiting

2. EPIDEMIOLOGY

While it can afflict either gender, females are more affected by bulimia nervosa. It typically manifests at 12.4 years of age. among the US, the estimated prevalence of bulimia nervosa is 0.9% among adolescents, 1.5% in the general female population, and 0.5% in the general male population. In developing nations, the prevalence of bulimia nervosa is unknown, although estimates from North America, Australia, and Europe range from 0.1% to 1.3% for men and 0.5% to 2.0% for women [6].

3. SYMPTOMS INCLUDE

The throat is sore and irritated all the time. Enlarged salivary glands in the jaw and neck region. Teeth that are becoming more sensitive and deteriorating due to exposure to stomach acid, as well as worn tooth enamel. Acid reflux disease as well as additional digestive issues. Discomfort and distress in the stomach caused by abusing laxatives. Severe fluid purging leads to dehydration. An electrolyte imbalance, characterized by excessively high or low levels of sodium, calcium, potassium, and other minerals, can result in heart attacks or strokes.

4. ETIOLOGY

Although the exact cause of bulimia nervosa is unknown, it is most likely complex. The binge behaviour linked to this illness may be influenced by anomalies in interoceptive function, namely in the insula. According to a 2016 study, individuals with bulimia nervosa and anorexia nervosa exhibit diffuse changes in white matter structural and functional connectivity, especially in the areas that control hunger and reward perception. Additional research has suggested that women

may have a 2.0% change in intrinsic functional brain architecture a severe eating problem characterized by bingeing and strategies to prevent gaining weight. An eating disorder with life-threatening potential is bulimia. This illness causes binge eating. They then take action to prevent gaining weight. This usually refers to vomiting or purging. However, it can also refer to fasting or over-exercising. Counselling, medicine, and nutrition instruction are among the treatments [7].

5. DIAGNOSIS

A patient with bulimia nervosa should undergo the following comprehensive evaluation: a thorough metabolic panel that includes calcium, serum creatinine, blood urea nitrogen, electrolytes, and liver function tests. Full blood count with differential. Think about finding out your vitamin B12 level. Urinalysis. If the condition is severe, get an ECG and serum levels of phosphorus and magnesium. Pregnancy testing should be done on female patients. Testing for luteinizing hormone, prolactin, beta-HCG, and a follicle-stimulating hormone is recommended for female patients with secondary amenorrhea to determine if there are any more possible causes of the condition. There are lab tests available to check for rhenin, emodin, aloe-emodin, and bisacodyl in the urine or stool. To establish the diagnosis, a positive test for a stool or urine laxative is not required. Transaminitis, hyponatremia, and hypokalemia (including hypokalemic hypochloremic metabolic alkalosis) are laboratory abnormalities linked to bulimia nervosa [8]. After ruling out any other medical explanations for the patient's vomiting and increased bowel movements, the doctor should diagnose bulimia nervosa, especially if the patient claims that their bingeing or purging is

unconscious behaviour. These illnesses are typically unrelated to a practice of binge eating or an unhealthy obsession with weight or body image. These health issues consist of the following: In addition to typically presenting with abnormal transaminases or bilirubin on a comprehensive metabolic profile, biliary illness can produce nausea and vomiting.

Although irritable bowel syndrome is often unrelated to episodes of binge eating, it can increase the frequency of bowel movements. neurological conditions: to rule out a neurological cause for vomiting, a comprehensive evaluation should include a neurological examination [9].

6. DRUG POSSIBILITIES FOR BULIMIA NERVOSA

The main goal of treatment is to get the patient to stop bingeing and purging. It has been demonstrated that selective serotonin reuptake inhibitors, like sertraline, citalopram, and fluoxetine, lessen bulimia nervosa symptoms. The sole FDA-approved treatment for bulimia nervosa is fluoxetine. There seems to be a substantial difference between a placebo and a higher dose (60 mg) in terms of reducing the frequency of binge episode vomiting. There is little evidence to support the use of other drug classes to treat this illness. When compared to a placebo, trazodone has considerably decreased the frequency of binge-eating episodes. Because of their lethality and possible side effects, monoamine oxidase inhibitors and tricyclic antidepressants are only used in circumstances where other treatments have failed. Patients with bulimia nervosa should not use bupropion due to the increased risk of epileptic episodes. Topiramate, an antiepileptic drug, has been demonstrated to reduce binge episodes; however, side effects, including weight loss and cognitive issues, should be well watched. Individual psychotherapy and cognitive-behavioural treatment have also shown promise in clinical trials for treating bulimia nervosa. Since individuals with bulimia nervosa are more likely than the general population to suffer from various mental illnesses, screening for suicidality and concomitant psychiatric disorders should be done [10-14]. Numerous general medical issues, such as metabolic alkalosis, dehydration, constipation, and cardiac arrhythmias, can result from bulimia nervosa. In addition to stopping the purging behaviour, saline treatment is recommended for fluid volume depletion, which is the most frequent cause of metabolic alkalosis

in bulimia nervosa patients. Consider intravascular administration for inpatients; however, these patients need to be watched for indications of volume overload. Similar measures are taken to address dehydration linked to bulimia nervosa. Intravenous saline has no part in the infrequent occurrences of average or increased fluid volume with alkalemia in a bulimia nervosa patient. Exercise, proper hydration, and dietary fibre are treatments for constipation related to bulimia nervosa or caused by stopping laxatives. Low doses of lactulose or powdered polyethylene glycol may be administered if laxatives are still required. Consider getting a cardiology consultation if a patient has significant or symptomatic cardiac issues from bulimia nervosa, which are typically brought on by electrolyte imbalances [9]. In randomized, controlled trials, the effectiveness of cognitive-behavioral therapy in treating bulimia nervosa patients has been compellingly shown. The goal of this therapy is to help patients overcome maladaptive ideas about their bodies (such as the idea that one's physical appearance determines their value as a person) and to teach them alternative coping mechanisms for the emotions that lead to a desire to purge. 30 per cent of patients receiving cognitive-behavioural therapy were in remission at the end of treatment, as defined by a frequency of purging of less than twice per week, compared with only 6 per cent in the psychotherapy group in a five-month study involving 220 patients who were randomly assigned to either individual cognitive-behavioural therapy or interpersonal psychotherapy. This improvement was confirmed in four-month research with sixty bulimic patients receiving both solo and group cognitive-behavioural treatment; with either of these approaches, the rate of binge eating and purging behaviour decreased by eighty per cent. By the sixth session of cognitive-behavioural therapy, a reduction in the frequency of purging of seventy per cent or more is indicative of a positive long-term outcome [15].

7. DISCUSSION AND CONCLUSION

An introduction to bulimia nervosa, covering its different causes, epidemiology, and alternative therapies, opens each of our review articles. Our results show that drugs do treat. The therapy of bulimia nervosa requires more randomised controlled trials. We hope to do an initial study on bulimia nervosa in the future. Future counseling-based research in our nation or state will evaluate patients' physical and mental health and

generate more precise data on bulimia nervosa and its treatment, thanks to the assistance of our colleagues.

CONSENT AND ETHICAL APPROVAL

It is not applicable.

ACKNOWLEDGEMENT

The authors would like to thank, Azad Institute of Pharmacy & Research (AIPR), Lucknow, U.P, India, Lucknow, Uttar Pradesh, India for extending their facilities.

COMPETING INTERESTS

Authors have declared that no competing interests exist.

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