

Dental Effects of Eating Disorders

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ABSTRACT

Background: The two main eating disorders, bulimia nervosa and anorexia nervosa, are updated in this article. Both diseases are more common in women. Significant morbidity and mortality are linked to eating disorders. Patients who experience cardiac arrhythmias are at risk for sudden death. Some patients are concerned about suicide. Although the exact cause of eating disorders is not known, genetic, cultural, and psychological variables all seem to be involved. In order to stabilise the patient, medical intervention may entail hospitalisation, medication, behaviour modification, and psychotherapy. Currently, it is unclear how the treatment will pan out in the long run. Discussed is the dentist's function as a "case finder." Also discussed is the dentist's involvement in helping individuals with eating problems get their teeth and oral tissues back to a healthy state.

Keywords: Oral Surgery, Oral Medicine, Oral Pathology, Oral Radiology Endo

1. INTRODUCTION

Checking for serious medical and behavioural abnormalities in patients is one of the dentist's key responsibilities. The dentist may discover signs and symptoms that point to the presence of an undiagnosed medical or behavioural issue by gathering a thorough medical history, taking vital signs, performing a head and neck and thorough intraoral examination, and conversing with the patient. When this happens, the dentist should go over the results with the patient and recommend that they have a medical evaluation and treatment. Dentistry has a well-established and approved "case finding" role for diseases like hypertension, diabetes, and cancer. In a similar vein, the dentist may be the first health care provider to notice clinical signs that strongly suggest serious psychologic or behavioural issues. Patients with findings suggesting potential psychologic or behavioural disorders should be treated using the same methodology as a "case finder." This article's goal is to cover the two main eating disorders, bulimia nervosa and anorexia nervosa, with a focus on the dentist's function as a case finder and in managing the oral and dental repercussions of these illnesses.

Prevalence and incidence

Anorexia nervosa and bulimia nervosa, the two main eating disorders, are significant contributors to psychologic and physical morbidity in women (90% to 95%) and to a considerably lesser level in men (5% to 10%). [1, 2]1% of women between the ages of 12 and

25 are thought to be affected by anorexia nervosa (J. Mc Sherry, MD, personal written communication, January 1997). The incidence ranges from 0.24 to 7.3 cases per 100,000 people annually. [1]

Anorexia nervosa is less frequent than bulimia nervosa. According to J. Mc Sherry, MD, personal written correspondence, January 1997, the prevalence ranges from 1% to 5% for the majority of people and can reach 15% in some. Between 40% and 50% of people who have anorexia nervosa also have bulimia. [1, 3] An estimated 33% of bulimia nervosa sufferers abuse alcohol or stimulants. Over 50% of bulimia sufferers also suffer from personality issues. [2, 4]

Etiology

There is no known aetiology for these eating disorders. These illnesses' origin seems to be influenced by genetic, cultural, and mental factors. The genesis of eating disorders has also been linked to primary hypothalamic dysfunction; however, the identified anomalies in the hypothalamus go back to normal with weight gain, suggesting that they are secondary in nature. Women with type 2 diabetes have been found to have a higher prevalence of eating problems. [1, 4, 5]

Eating disorders have a complex aetiology that includes cultural factors. The desire for health and thinness is a strong influence in contemporary society, and it may increase patients with eating disorders' dread of being overweight or push a case that is on the cusp of disease into a state of overt illness. The emphasis on body shape, weight, and appearance in some sports, hobbies, and professions (such as modelling, skating, gymnastics, track, wrestling, and ballet dancing) may contribute to eating disorders. For instance, the prevalence of anorexia nervosa in ballet dancers is ten times higher than in the general population. [4, 6, 7]

There is some evidence that suggests eating problems may emerge as a result of abnormal serotonin-mediated neurotransmission. Adipose tissue releases the peptide leptin into the blood, which prevents the production or release of neuropeptide Y, a potent eating signal, in the brain. Leptin and neuropeptide Y inhibition may be connected by the neurotransmitter serotonin. 4

Clinical results

Eating disorders like anorexia nervosa and bulimia nervosa are typically discovered in young, previously healthy women who experience a crippling fear of gaining weight. The majority of the vulnerable population are white women from middle-class families. Rarely do the illnesses affect men, poor people, or women who are black or Oriental. The desire of thinness is the main motivation; everything else comes in second. This goal is primarily accomplished in anorexia nervosa by severely limiting food intake, which leads to emaciation. Massive binge eating is followed by excessive laxative or enemas use in bulimia-induced vomiting. Despite their concern with food, bulimic people do not lose a lot of weight. While some experts regard the two disorders as separate diseases, others list bulimia as a subtype of anorexia nervosa. Overlap syndromes exist because bulimic behaviour can be seen in emaciated individuals who meet the criteria for true anorexia nervosa and because people who have bulimia frequently go through phases of anorexia. [4]

Ventricular tachyarrhythmias can cause sudden death in anorexia nervosa patients. When weight falls below 35% of optimal weight, the risk of death increases. Aspiration, esophageal

or stomach rupture, hypokalemia with cardiac arrhythmias, pancreatitis, and ipecac-induced myopathy or cardiomyopathy are complications of bulimia. [4]

Anorexia nervosa has a better prognosis than bulimia nervosa. Approximately 50% of anorexia nervosa patients regain normal weight, 20% improve but stay underweight, 20% continue to be anorexic, 5% develop obesity, and 6% or more pass away. Cardiac arrhythmias linked to malnutrition or suicide cause death. Bulimic patients have a worse prognosis due to more severe psychological abnormalities that increase the risk of suicide and the medical problems associated with binge eating. After 18 months of treatment, over 40% of bulimic patients are still bulimic. Within a year after healing, roughly two thirds of patients relapse. [4] Currently, it is really unknown how anorexia nervosa and bulimia nervosa will progress over time. [2]

Pharmacy management

In the absence of weight increase, the therapy of anorexia nervosa cannot advance meaningfully. First, the patient's medical stability and nutritional state are assessed. Hospitalization may be necessary for patients who have electrolyte imbalances or ECG abnormalities. Psychiatric treatment can start once the patient has achieved medical stability. Techniques for behaviour modification are applied to help the patient acquire weight. Psychotherapy's effectiveness has not been proven. The outcomes of patients with anorexia nervosa have not been considerably improved by drug therapy (antipsychotics, cyproheptadine and antidepressants). Fluoxetine, an antidepressant, has been demonstrated to be helpful in preventing relapse in people who have put on weight again. [1, 4]

Treatments for bulimia nervosa comprise antidepressant drugs, cognitive behaviour therapy, and interpersonal therapy. The majority of patients receive outpatient care. Hospitalization may be necessary for those who have medical issues including a severe electrolyte imbalance or severe bulimic symptoms. 1 An empathetic doctor's supportive care might also be beneficial for the bulimic patient. In order to reduce the risk of aspiration or stomach rupture, efforts should be taken to break the cycle of bingeing-regurgitation or at the very least reduce the amount of food consumed. Vomiters and users of laxatives may need a potassium supplement. [4]

Orthodontic management

Dealing with the outcomes of their diet (dental caries) and the impact of chronic vomiting on the teeth is one responsibility of the dentist in the treatment of bulimia nervosa patients (erosion). Vomitus has an average pH of 3.8, according to one study, and prolonged exposure to it can severely erode teeth. The patient may place far greater value on the dentist's other position as a case finder, though. By noticing a pattern of tooth erosion consistent with regurgitation of stomach contents, the dentist may be the first to notice the eating disorder. This may result in a referral, a medical diagnosis, and medical therapy.

Chronic consumption of extremely acidic carbonated beverages or fruit juices might lead to dental deterioration. Regularly sucking tomatoes, other fruits, or lemons can also cause tooth erosion. Usually, this kind of erosion affects the labial surfaces of the teeth. [9, 10] The dentist may be able to rule out an excessive intake of carbonated beverages, acidic fluids, or acid-containing foods like tomatoes and citrus fruits as the main cause of erosion by acquiring a dietary history of the food and liquids ingested over the course of a week. Dental

erosion with a similar pattern can also result from acid exposure at work (galvanising, battery assembly and plating).

It could be more challenging to recognise and treat anorexic patients in a dentist office. Dental bulimia symptoms can be used to identify patients with anorexia nervosa are also bulimic. [1, 3] The weight loss of young patients who appear to be anorexic should be discussed. The potential of self-starvation should be discussed with the patient if no symptoms or a history of major medical conditions like cancer or diabetes mellitus are present. There needs to be a very open discussion about the severe medical implications of anorexia nervosa, including as death (mortality rate is 10% or higher). [10] Again, parents must be notified when there are young patients involved. There should be every effort made to refer these patients to a doctor for diagnosis and care.

Planning for treatment

Complex restorative operations should not be scheduled for patients with bulimia until the cycle of overeating and vomiting has been stopped. In some situations, complete covering could be necessary in an effort to save teeth. To restore impacted teeth, resin-bonded ceramic crowns and little dental preparation have been advocated. [6-8] Teeth with significant erosion can be repaired after the patient is stable and requests it. For teeth with little clinical crown left, endodontic therapy, post-and-core, and cast restorations have been used. [10] It is important for the dentist and patient to understand that relapse is common and that complicated restorations may fail when recurrent vomiting returns. Prior to beginning complicated restorative or prosthetic treatment, anorexic patients should regain any lost weight and stabilise.

Oral complications

In 45% of bulimia patients, the serum amylase level has been shown to be high. 19 In the same study, it was discovered that hyperemetic pregnant women had blood amylase levels that were high but not nonvomiting pregnant women. Robertson and Millar¹⁹ came to the conclusion that in bulimic patients, vomiting raises serum amylase levels more than binge eating does. They hypothesised that the salivary gland was the source of the elevated amylase. Another study²⁰ discovered that the size of the parotid gland was enlarged in 36% of bulimic individuals and linked with the frequency of bulimic symptoms as well as the levels of serum amylase.

2. CONCLUSION

The oral and dental conditions that can occur in those who have bulimia nervosa or anorexia nervosa. Bulimic patients may experience extensive erosion of their teeth's occlusal and lingual surfaces. Extreme erosion can increase a tooth's sensitivity to cold temperatures and touch. These patients may have higher rates of dental caries due to a high carbohydrate diet and poor oral hygiene. Also possible is a reduction in salivation. Patients frequently lament having a dry mouth. Patients who practise poor oral hygiene are more susceptible to periodontal disease. Possible enlargement of the parotid glands. Patients with anorexia nervosa may experience dry mouth, reduced salivation, and atrophic mucosa. [3, 9, 10]

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