Bulimia in Diabetic Patients: A Review on Diabulimia

Latifeh Nezami[1], Froogh Abiri[1*], Esmail Kheirjoo[2]

1. Ph.D. Student of Psychology, Islamic Azad University of Tabriz, Tabriz, Iran.
2. PhD in Health Psychology, Department of Family Studies, Azarbaijan Shahid Madani University, Tabriz, Iran.

***Correspondence:**
Latifeh Nezami, Ph.D. Student of Psychology, Islamic Azad University of Tabriz, Tabriz, Iran.
Tel: (98) 914 322 1393
Email: froogh.abiri@gmil.com

Received: 12 April 2017

Accepted: 25 June 2018

Published in August 2018

Abstract

Objective: Eating disorder (bulimia) is common in young diabetic patients which may influence insulin levels. To reduce calories by manipulating insulin is known as Diabulimia. The purpose of this paper is to define Diabulimia and relative issues and highlight the need for early diagnosis and treatment of the disease. Studies showed that early diagnosis and intervention in the treatment of diabulimia can reduce the risk of premature death.

Keywords: Eating disorders, Bulimia, Diabetes, Diabulimia

Introduction

Diabetes mellitus is the most common chronic metabolic diseases in world. Diabetes causes many complications in different parts of the body. (1)

Type 1 diabetes is often diagnosed in young people which the body is not able to produce insulin. Type 2 diabetes occurs at any age. This type of diabetes is prevalent and is characterized by insulin resistance. At the national and international levels, the incidence of diabetes is increasing (2).

Studies showed that people with diabetes are at risk of death 3 times more likely than non-diabetics (3)

The World Health Organization estimates in 2050, there will be 300-200 million diabetic patients worldwide (4). In Iran, there are more than 3 million diabetic patients in over 20 years population (5), about 50% of diabetic patients are not aware of their diseases (6).

Disordered eating behaviors in diabetic patients

The chronic nature of diabetes has adverse psychiatric complications that make it difficult to control and treat. Therefore, along with training for their quality of life improvement, recognition of the psychiatric problems is an important part of comprehensive diabetes treatment. (7) Some groups of people are at greater risk for developing mental disorders such as diabetic patients. The incidence of psychiatric disorders in diabetic patients has been shown in several studies (8). Diabetes treatment depends on mental health and patients' self-care. The poor self-care and self-

monitoring blood glucose would increase complications of diabetes and decline of the quality of life. (9,10).

Mental disorder is a set of psychological conditions that cause discomfort to a person or incapacity in his or her behavior and thinking (11). The cause of mental disorders is not well known, but the main reasons are genetic and environmental factors (12). Eating disorders are one of the most significant mental / psychological disorders today. This type of disorder can cause physical and mental illness and affect the quality of life and may also increase mortality. The main cause of these disorders is still not well known and their treatment is difficult because many patients are disinclined to use current treatments (13).

Eating disorders can modify the pattern of food and nutrient intake which cause nutritional disturbances and threaten the health. Regarding what mentioned above, evaluation of abnormal eating habits and behaviors is important in evaluating the mental health of people (14).According to the fifth Diagnostic and Statistical Manual of Psychiatric Disorders (DSM-5), eating disorders have different types such as psychotic overeating (bulimia) as the most important and common. Psychotic overeating involves the unusual ingestion of a large amount of food and the feeling of lack of control during eating that occurs at least twice a week for six months (15). People with bulimia strongly blame themselves for overeating and the physical appearance. As a result, they try to compensate their overeating and refine themselves after overeat by vomiting, using laxatives, diuretics, other medications, fasting or vigorous exercise. The feelings of shame and distress lead to severe depression (12).

Self-esteem of patient suffers from bulimia affects the shape and body weight. Often this disease is hidden due to shame and clean-up after overeating. These patients use variety of diets but ultimately fail to eat because of dietary restrictions. In this case, it is said that the patient is in an alien state and struggles to get rid of the signs of the disease (16).

In general, 15 to 20% of the population is affected by eating disorders and 80% are female (15,17). Psychological causes of eating can include low self-esteem, feeling of incompetence, depression, anxiety and stress. In patients with bulimia nervosa, mood disorders and impulse control disorders are more prevalent. Also, medical evidences suggested that overeating can lead to serious health problems such as high blood pressure, diabetes, high cholesterol, heart attacks, cancers and arthritis (18).

Despite their mental suffering and high mortality, these patients do not accept their disturbances, support of families and friends, recognition from professional medicine and treatment interventions. It also disrupts the person's interpersonal relationships, destroys the current and future career and job position, and jeopardizes one's financial security. Social understandings of these patients are poor and sometimes distorted in interpersonal relationships (17).

The prevalence of bulimia in lifetime is 1.5% in women and 0.5% in men (11). The word diabulimia is a combination of two words, diabetes and bulimia. Symptoms of this disorder include rapid weight loss, sporadic eating patterns, obsession to shape and body weight, lethargy, flatulence, high and abnormal levels of blood glucose, ketone odor in breathing and urine (19,20).The combination of socio-cultural factors, psychological behaviors and psychological changes that occur during sexual maturation may be associated with increased eating behaviors (21).

In fact, cultural-social factors cover the beliefs and behaviors of people with eating disorder (22). People with diabetes as well as other eating disorders can appear with poor body impairment (an impression of a person's apparent defect or defect). This disorder is a type of obsessive-compulsive disorder and anxiety disorder (23). Past studies showed that girls with type 1 diabetes are more likely to

develop eating disorder than non-diabetic girls (20).

The strategy of weight loss, especially when it is performed by the removal of insulin, leads to diarrhea as a method of cleansing (24). The process of insulin removal is reported in adolescents with impaired eating with type 1 diabetes, and overeating and low-dose insulin are one of the most common methods for weight loss in adolescents (25).

In North America, about 19 women with type 1 diabetes have been studied; after 4 to 5 years, 71% of those who had normal diet had eating disorder and the number of women who had eliminated their own insulin rose from 14% to 34%. These behavioral disorders are associated with vascular complications, including retinal disease and impaired metabolic control (26). On the other hand, some diabetic patients reduce the insulin doses due to their cognitive problems, phobic needle anxiety, mood disorders, social barriers and anxiety about blood glucose deficiency (20).

Some groups are at greater risk of developing mental disorders such as diabetic patients. The majority of psychiatric disorders in diabetic patients have been shown in several studies (8,27). The impact of diabetes on psychological growth puts adolescents at risk of eating disorders .The presence of an eating disorder in adolescents with diabetes has a direct impact on blood glucose control and early onset of diabetes complications. There is an ever-increasing diagnosis of the eating disorders such as bulimia in diabetic patients (28).

Discussion

Eating disorder is a major problem in developed countries and is the cause of physical and psychological disorders among young women and adolescents in western countries. Although diabetic has been started since 1980, it has not been recognized as a medical or psychiatric diagnosis yet. Type 1 diabetes and eating disorder often affects adolescents and young people, especially women. People with diabetics also suffer from other abnormalities associated with eating behaviors, since they take a diet or exercise in order to control their weight and overcome their dissatisfaction with the body. Diabulimia is associated with macrovascular and microvascular complications.

Regardless of diagnosis, the support of affected people is also important, such as building a diabetic campaign and teaching various eating disorders that can increase the knowledge of diabetic young people and healthcare professionals working with type 1 diabetes patients.

Conclusions

Early diagnosis of Diabulimia is important for prevention of eating disorders in order to prevent it. Timely intervention and treatment can be a major way to prevent chronic long-term illness and mortality in young people with type 1 diabetes.

Suggestions

It is suggested that future studies be carried out by screening for eating disorders among people with diabetes.

References

1. Rezaye N, Tahbaz F, Kimeyagar M, Alavymajd H. Effect of nutrition education on knowledge, attitude and practice of patients with type 1diabetes in Aligodarz City. Journal of Shahrekord University of Medical Sciences. 2007;8(2):52-9. (In Persian).
2. Yi-Frazier J, Hilliard M, Cochrance K, Hood K. The Impact of Positive Psychology on Diabetes Outcomes.published online in SciRes. 2012;3(12):1116-24.
3. Jaffa T, McDermott B. Eating Disorders in Children and Adolescents. Cambridge University Press. 2006;177-8.
4. Hussain A, Claussen B, Ramachandran A, Williama R. Prevention of type 2diabetes. Diabetes Res Clin Pract. 2006;76:317-26.
5. Larijani B, Abolhasani F, Mohajeri Tehrani MR, Tabatabaei Malazy O. Prevalence of diabetes mellitus in Iran in 2000.Iranian Journal of Diabetes & Lipid Disorders. 2005;4(3):75-83. (In Persian).

6. Peymany M, Tabatabaye Malazy A, Heshmat R, Amiri Moghaddam S, Sanjari M, Pajouhi M. Knowledge, attitude and practice in the field of diabetes and its complications. Journal of Lipid and Diabetes. 2010;9(4):357-64. (In Persian)
7. Vazirynejad R, Sajady M, Magol N. Historical cohort study assessing the effect of diabetes on the quality of life of patients. Research in Medicine. 2010;34(1):35-40. (In Persian).
8. Plotnikoff RC. Physical activity in the management of diabetes: Population –based perspective and strategies. Can J Diabetes. 2006:30(1):52-62.
9. Biby EL. The Relationship between body dismorphic disorder and depression, self-esteem, somatization, and obsessive- compulsive disorder. J Clin psycho. 2012;54(4):489-99.
10. Norton B. When is a teen magazine not a teenmagazine Jornal of Adolscent and Adult Litteracy. 2002;45(4):296-9.
11. Seyed Mohammadi Y. Abnormal Psychology :Clinical Perspectives on Psychological Disorders .Translated. Ravan Publication .Tehran. 2015. (In Persian).
12. Barlow DH, Durand VM. Abnormal psychology: An integrative approach. (7th ed.). Belmont, CA: Wadsworth/Cengage Learning. 2013.
13. Dale J, Williams SM, Bowyer V. What is the effect of peer support on diabetes outcoms in adults ?A systematic review.Diabetic Medicine. 2011;29:1361-77.
14. Rustayi R, Haji Faraji M, Dezhkam M, Houshiar rad A, Mehrabi Y, Zogi T. The prevalence of eating disorders and related factors in female high school students in Tehran in. Journal nutrition and food industry in Iran. 2013;135(1):144-7.
15. American Psychological Association (APA). The Publication Manual of the American Psychological Association (5th ed.). Washington, DC. 2013.
16. Russell GFM. Bulimia nervosa: An ominous variant of anorexia nervosa. Psychological Medicin 1979;9:429-48.
17. LeBlance H. Eating disorders among girls and woman in Canada. House of Commons Chambere DEC Communes Canada. 2014.
18. Klatt I .Treating the obese-binge eating disorder and food addiction: A model program. Published Dissertation of PhD in clinical psychology. California Institute of Integral Studies. California (CA). 2008.
19. Kakleas K, Kandyla B, Karayianni C, Karavanaki K. Psychosocial problems in adolescents with type 1 diabetes mellitus. Diabetes & Metabolism. 2009;35(5):339-50.
20. Logan -Stotland N. Overcoming psychological barriers in insulin therapy. Insulin. 2006;1(1): 38-45.
21. Polakof S, Mommsen TP, Soengas JL. Gluco-sensing and glucose homestasis; From finish to mammals. Comparative Biochemistry and Physiology Part B. Biochemistry and Molecular Biology. 2011;160(4):123-49.
22. Levine MP, Smolak L. The Prevention of Eating Problems and Eating Disorders: Theory, Research, and Practice. Taylor & Francis. 2005;42-70.
23. Bienvenu OJ, Samuels JF, Wuyek LA, Liang KY, Wang Y, Grados MA, et al. Is obsessive-compulsive disorder an anxiety disorder, and what, if any, are spectrum conditions? A family study perspective. Psychol Med. 2012;42(1):1-13.
24. Hasken J, Kresl L, Nydegger T, Temme M. Diabulimia and the role of the school health personnel. Journal of school Health. 2010;80(10):465-9.
25. Jones JM, Lawson ML, Daneman D, Olmsted MP, Rodin G .Eating disorders in adolescent females with and without type 1 diabetes :cross sectional study. British Medical Journal. 2000;320(72):1563-6.
26. Rydall AC, Rodin GM, Olmsted MP, Devenyi RG, Daneman D. Disordered Eating Behavior and Microvascular Complications in Young Women with Insulin-Dependent Diabetes Mellitus. New England Journal of Medicine. 1997;336(26):1849-54.
27. Takii M, Uchigata Y, Kishimoto J. The relationship between the age of onset of type 1 diabetes and the subsequent development of a severe eating disorder by female patients. Paediatric diabetes. 2011;12.
28. Jancin B .Type 1 Diabetic Teens Depression vs. Diabulimia tinurl com/nxyntyt. 2014.