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Research Article

**DEPRESSION AMONG DIABETIC PATIENTS SEEN IN
PRIMARY HEALTH CARE CENTRES****Ammar Abdulfattah Al Kubaish¹, Yahya Tawfiq Alsaileek², Kawthar Ahmed Kadhem³,
Noor Sadik Alghanim⁴, Haider Mahdi Abu Shaheen¹**¹ Saihat 2 Primary HealthCare – Qatif – Saudi Arabia² Eradah and mental health complex – Dammam – Saudi Arabia³ Canadian medical center – Dammam – Saudi Arabia⁴ DMC – Dammam – Saudi Arabia**Article Received: September 2022 Accepted: September 2022 Published: October 2022****Abstract**

Introduction: Diabetes Mellitus (DM) is a metabolic disorder caused by insufficient production of insulin by the pancreas or when the body is unable to use insulin efficiently. Depression and anxiety are the two most common disorders associated with diabetes mellitus. Type 2 diabetes is frequently associated with depression. There are increased symptoms of depression seen in diabetic patients. It is necessary to optimally evaluate the psychological condition of diabetic patients. It also becomes necessary to extensively review the clinical symptoms of anxiety and depression of diabetic patients and have an elaborative treatment strategy that does not worsen the condition furthermore.

Aim of the Study: The present study aims to understand the association between depression and diabetic patients in primary health care centers.

Methodology: Comprehensive research of depression among diabetic patient presented in primary health care center. PubMed search engines were the mainly used database for the search process, articles were collected from the year 2001 to 2021. The term used in the search were: Diabetes mellitus type 2, primary health care, depression, anxiety.

Conclusion: There are various psychological symptoms that are associated with diabetic patients. To control diabetes and have appropriate glycemic control, treatment of depression and anxiety is an important factor in improving lifestyle. The symptoms related to depression in diabetic patients are often overlooked and may affect their existing treatment and course of illness. Therefore, diagnosis and treatment of psychophysiological, psychiatric, and psychosocial statements are important in these patients and may require proper counseling, an elaborative treatment plan, and physical therapy.

Keywords: Diabetes mellitus type 2, primary health care, depression, anxiety.

Corresponding author:**Ammar Abdulfattah Al Kubaish,**

Consultant family medicine,

E-Mail: aalkubaish@moh.gov.sa - 0591776717

QR code



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INTRODUCTION:

Diabetes mellitus (Diabetes) is considered a metabolic disorder that is chronic in the course. In diabetes, due to a deficiency of insulin, the organism has not benefited from enough fats, carbohydrates, and protein. Diabetes is increasing globally because of dependence on developing technology, a sedentary lifestyle, and obesity. In 2014, World Health Organization estimated nearly 9% of diabetic patients worldwide above the age of 18 years old. By 2035, 592 million people will be suffering from diabetes.^[1,2]

There are two types of diabetes Mellitus that is DM Type 1 and DM Type 2. Diabetes Mellitus type 1 usually occurs early in age and begins in childhood, while type -2 diabetes mellitus occurs in old age with overweight people. 90% of the population is suffering from type – 2 diabetes mellitus. It is caused damage to the pancreas, where the pancreas is not able to produce enough insulin. Type – 1 diabetes mellitus is a multifactorial disease and should be taken seriously since lifestyle modification and weight control is not enough for the control of sugar level. A type- 1 diabetic patient may have to take insulin injections several times a day to prevent the sugar level from reaching high levels and to prevent further complications. There is insufficient production of insulin in type-2 Diabetes since body cells show resistance to insulin. Type – diabetes is a slowly progressing disease. Unlike type-1, diet control, oral medication, exercise, and weight loss are sufficient for the treatment of diseases, but they may also require insulin later in life.^[3]

Diabetes is not only considered a metabolic disorder, but it's also a disease of psychosocial and psychiatric condition. It is often associated with social, physical, and sexual problems. 18% of people are known to have a psychiatric disorder associated with diabetes, and among 10% of them, psychopathological conditions are not recognized. Therefore, while treating diabetic patients, it is important to take the mental, emotional and behavioral situation into account. Depression and anxiety are nowadays frequently associated with diabetes as its one of the complications, and intervention and treatment methods thus should be modified accordingly. Depression is encountered at a higher rate among the diabetic population.^[3]

Prevalence

There are various studies reporting the association of diabetes with depression, and it is twice as common among type-2 diabetes mellitus as compared to the general population. The prevalence of depression in type-2 diabetes mellitus is between 24-30%. Depression symptoms are 28.2% prevalent in diabetic female patients, while 18% of men are known to have

such symptoms. 10% of the diabetic population is known to have major depressive symptoms.^[4-7]

Depression is also associated with type-1 diabetes in nearly 30% of cases. Depression in Diabetes is either due to quality of life, adverse effects of diabetes, response to treatment, and affordability associated with treatment in the poor socio-economic class. Diabetic symptoms and depressive symptoms affect each other. Depression can be suspected if diabetic patients show an uncooperative, unwell state and lower functioning medical status.^[8]

There are certain neurotransmitter and neuroendocrine abnormalities identified commonly in diabetes patients suggestive association of diabetes with depression. The immune system leads to an increase in the level of cortisol, causing dysregulation of the hypothalamic-pituitary-adrenal axis and decreasing insulin sensitivity and chronic inflammatory process.^[9]

Depression is a risk factor in diabetes mellitus type-2; it is a complication of diabetes, particularly seen with the vascular complication of diabetes mellitus. In the long term presence of diabetes, less daily activities, smoking, obesity, and extreme caution may cause depression. But the epidemiological data supporting this is lacking. Often there is an increased level of depression seen in diabetic patients due to low education, unmarried status, elderly patients, and female gender.^[10]

Type 2 Diabetes Mellitus increases the probability of depression in many patients. The complications of diabetes, long duration of disease, shortage of daily activities, smoking, and obesity all may contribute of depression. However, the epidemiological evidence for them is limited. People with lower education, female gender, or unmarried status in studies of the elderly are associated with depression.^[11]

According to Zenteno and Cardiel, depression is a risk factor for complications in Diabetes mellitus. When glycaemic control is not provided, this can lead to chronic complications. These complications are peripheral neuropathy, nephropathy, and retinopathy. Neuropathy is the most common complication in diabetes, followed by retinopathy and nephropathy.^[12] These complications are seen in higher numbers of depressive symptoms and do not subside easily if depression is not treated appropriately. Depression affects the control of blood sugar levels and patients' compliance with treatment. Insulin resistance readily

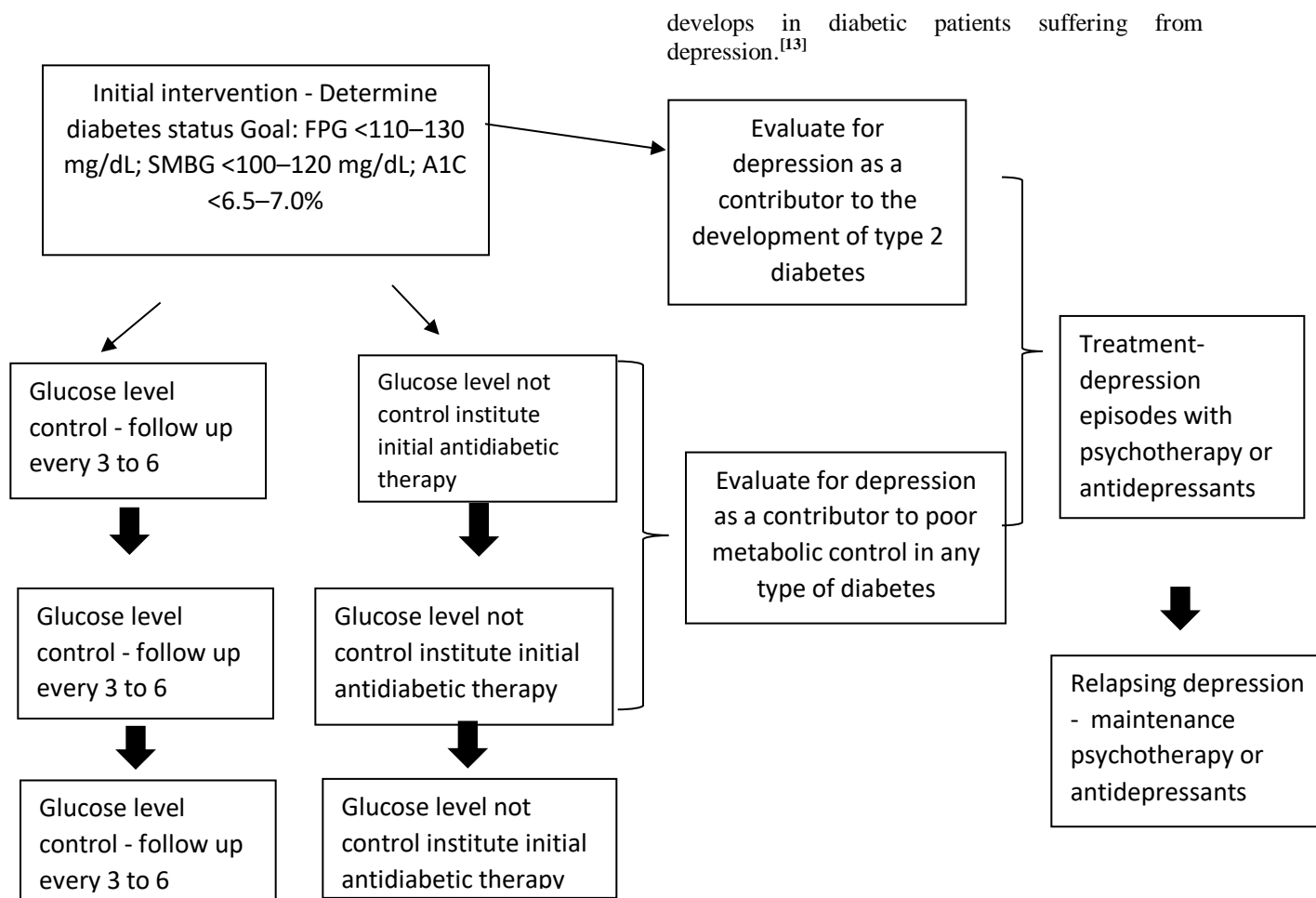


Fig. This depicts a combined treatment approach for managing concomitant type 2 diabetes and depression. As stated, depression may participate in the progression or development of diabetes in patients during its course. Diabetes treatment should be adjusted stepwise in conventional treatment in depression patients. Clinical depression should be managed simultaneously. Maintenance therapy is needed for any relapse of a depressive episode.^[10]

Patients not meeting appropriate glucose control targets should have their diabetes treatment adjusted in a stepwise progression following conventional recommendations, such as those provided in this example. Clinically significant depression should be managed simultaneously, with maintenance therapy being offered for patients with relapsing depression. The diabetes management treatment was adapted with permission from the Texas Diabetes Council.^[10]

Among other unemployed populations, housewives are at risk for reporting anxiety since they are likely to

not report depression symptoms and lack feelings of stability in an unemployed state; depressive episodes are encountered in unemployed patients fur to lack of stability. Depression is known to influence our life. Balancing work and family is often challenging and requires treatment modification.^[10]

CONCLUSION:

There are various psychological symptoms that are associated with diabetic patients. To control diabetes and have appropriate glycemic control, treatment of depression and anxiety is an important factor in improving lifestyle. The symptoms related to depression in diabetic patients are often overlooked and may affect their existing treatment and course of illness. Therefore, diagnosis and treatment of psychophysiological, psychiatric, and psychosocial statements are important in these patients and may require proper counseling, an elaborative treatment plan, and physical therapy.

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