COMBINATION OF DIABETES AND METABOLIC SYNDROME

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https://doi.org/10.5281/zenodo.14528640

Abstract. *This article provides an overview of the relationship between type 2 diabetes and metabolic syndrome.*

Key words: *Type 2 diabetes, metabolic syndrome, pancreas, B-cells, insulin resistance, glucose, triglycerides, obesity, polyuria, polyphagia, headache, blurred vision, nervousness.*

СОЧЕТАНИЕ ДИАБЕТА И МЕТАБОЛИЧЕСКОГО СИНДРОМА

Аннотация. *В этой статье представлен обзор взаимосвязи между диабетом 2 типа и метаболическим синдромом.*

Ключевые слова: *диабет 2 типа, метаболический синдром, поджелудочная железа, В-клетки, инсулинорезистентность, глюкоза, триглицериды, ожирение, полиурия, полифагия, головная боль, нечеткость зрения, нервозность.*

Introduction: The type of diabetes that is called an invisible epidemic in the world is increasing day by day. This can also be seen from the average number of doctors. Unfortunately, as evidenced by the fact that it is twice as high to occur in this high age group as well. Type 2 Diabetes Causes Obesity.

Diabetes is a chronic, metabolic disease characterized by elevated levels of blood glucose (or blood sugar), which leads over time to serious damage to the heart, blood vessels, eyes, kidneys and nerves. The most common is type 2 diabetes, usually in adults, which occurs when the body becomes resistant to insulin or doesn't make enough insulin. In the past 3 decades the prevalence of type 2 diabetes has risen dramatically in countries of all income levels.

Obesity, especially when associated with increased abdominal and visceral fat distribution and increased intrahepatic and intramuscular triglycerides, is a major risk factor for prediabetes and type 2 diabetes. , because it causes insulin resistance and β-cell dysfunction.

Dietary fat does not immediately affect blood sugar levels, but eating fatty foods can slow down digestion and make it harder for insulin to work properly.

The task of B-cells produced by the pancreas is to reduce the amount of glucose in the blood. When there is too much glucose in the blood, the body may try to pass it through the urine. Dehydration occurs in the body. The higher the blood sugar level, the more frequent the headache. In addition, vision deteriorates. Due to the lack of insulin, glucose accumulates in the blood, does not enter the cells and does not participate in energy production. Therefore, the patient always

feels hungry. Without glucose in the cells, not enough energy is produced. As a result, fatigue increases in the body. You don't have enough energy for the tasks you have done before. Diabetes mellitus is a disease characterized by the inability of glucose, the main source of energy, to enter the cells, and metabolic processes in the body begin to malfunction. As a result, insulin levels decrease and blood sugar increases.

Materials and methods

Type 2 diabetes develops slowly. There is also an asymptomatic type of the disease.

constant dry mouth, constant thirst, sometimes the patient can drink seven to ten liters of water a day;

• a lot and frequent urination (polyuria);

• increased appetite (polyphagia);

• soreness/itching/dryness of the skin and soft tissues, the appearance of purulent ulcers on the skin and soft tissues;

• severe fatigue, insomnia, decreased physical and mental activity;

• deterioration of vision;

Metabolic syndrome is a group of factors that increase the risk of developing cardiovascular disease and type 2 diabetes.

• Metabolic syndrome is diagnosed when at least three of the following five factors are present:

1. Increase in waist circumference: (more than 102 cm for men and 88 cm for women).
2. High blood pressure (systolic ≥130 mm Hg or diastolic ≥85 mm Hg).
3. Elevated triglyceride levels (≥150 mg/dL).
4. Decreased high-density lipoprotein (HDL) levels (less than 40 mg/dL for men and less than 50 mg/dL for women).
5. Increased fasting blood glucose (≥100 mg/dL).

• Causes and risk factors

Obesity

Insulin resistance

Genetic predisposition

Malnutrition (increasing calories, fats and carbohydrates)

Lack of physical activity

Age and gender

Consequences of metabolic syndrome

Increased risk of cardiovascular diseases (myocardial infarction, stroke).

Development of type 2 diabetes

Liver diseases (fatty liver disease)

Kidney problems

Obesity is a disease characterized by excessive accumulation of adipose tissue in the subcutaneous adipose tissue, abdomen, chest and other areas of the body.

How obesity occurs

• Obesity occurs as a result of an imbalance between the energy content of the food consumed and the energy used by the body, that is, excess energy is accumulated in the form of low energy and high energy consumption. accumulation of fat in different parts of the body.

• The human body is evolutionarily adapted to store food when it is sufficient, and to expend it when food is scarce. However, its excessive accumulation and lack of consumption leads to disease.

• The most common causes of obesity are inactivity, poor diet and genetic factors.

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So, if you have diabetes, hyperinsulinemia, high cholesterol or high blood pressure, you should be under the supervision of a doctor to control these diseases. Exercise and weight loss are key to improving insulin sensitivity and lowering blood pressure and cholesterol levels.

Conclusion: If we pay attention to the above signs, we will detect type 2 diabetes early.

By taking timely measures against metabolic syndromes, we can prevent type 2 diabetes.

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