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DIAGNOSTIC CRITERIA AND TREATMENT OF TYPE 2 DIABETES MELLITUS

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ABSTRACT

Type 2 diabetes mellitus is a pressing problem of our time. This is due to an increase in the number of people suffering from diabetes, the chronic nature of the disease, and the development of various complications that lead to a decrease in the quality of life and a reduction in its duration. The article provides information about risk factors, clinical manifestations, features of diagnosis and treatment of this disease.

Keywords: type 2 diabetes mellitus, risk factors, clinical manifestations, diagnosis, treatment.

ДИАГНОСТИЧЕСКИЕ КРИТЕРИИ И ЛЕЧЕНИЕ САХАРНОГО ДИАБЕТА 2 ТИПА

АННОТАЦИЯ

Сахарный диабет 2 типа является актуальной проблемой современности. Это связано с увеличением числа людей, страдающих сахарным диабетом, хроническим характером течения заболевания, развитием различных осложнений, которые приводят к снижению качества жизни и сокращению ее продолжительности. В статье представлена информация о факторах риска, клинических проявлениях, особенностях диагностики и лечения данного заболевания.

Ключевые слова: сахарный диабет 2 типа, факторы риска, клинические проявления, диагностика, лечение.

INTRODUCTION

Diabetes mellitus is one of the most common diseases in the world, and the number of people suffering from this pathology is constantly growing. Diabetes mellitus often complicates the course of various diseases, and often drug therapy, which is used to treat existing pathologies, is undesirable or contraindicated in patients with diabetes mellitus.

Type 2 diabetes mellitus (non-insulin-dependent diabetes mellitus, type 2 diabetes mellitus) is a chronic metabolic disorder characterized by excess glucose in the blood and cell insensitivity to the hormone insulin. In type 2 diabetes, the process of obtaining energy from glucose is disrupted: cells stop responding to insulin, so glucose cannot penetrate inside. Pathology can develop for a long time with virtually no symptoms, so sometimes a person does not even notice that something has gone wrong. However, at this time, irreversible changes occur in the vessels: glucose accumulates in them

and has a toxic effect. As a result, not only blood vessels suffer, but also internal organs, the brain, and the nervous system.

Type 2 diabetes mellitus primarily affects adults, predominantly middle-aged and elderly people, but is now becoming more common among the younger population. This is a serious pathology that negatively affects the quality and length of life. [1, 5, 10]

Diabetes incidence statistics are growing every year. Diabetes is characterized by the development of serious complications that require expensive treatment and is one of the main causes of premature mortality. Unfortunately, the vast majority of people do not have basic knowledge that the basis of diabetes prevention is adherence to healthy lifestyle rules and annual blood sugar monitoring.

Factors that play an important role in the occurrence of diabetes mellitus include the age of patients over 45 years of age; Type 2 diabetes in close relatives; history of impaired glucose tolerance or impaired fasting glucose; obesity; arterial hypertension; presence of cardiovascular diseases; sedentary lifestyle [2, 4, 14].

Type 2 diabetes mellitus is caused by impaired carbohydrate metabolism due to increased cellular insulin resistance. The ability of tissues to accept and use glucose decreases, and a state of hyperglycemia develops. To compensate, the body intensively removes excess glucose through the kidneys. The amount of glucose in the urine increases, and glucosuria develops. There is an increase in osmotic pressure and polyuria occurs. These mechanisms explain most of the symptoms of diabetes - extreme thirst, dry skin, weakness, arrhythmias.

In most cases, there is no clinical picture of type 2 diabetes. The first symptom that a patient may experience is an increased feeling of thirst. A person feels dry mouth, drinks up to 3-5 liters a day. As a result, the amount of urine and the frequency of the urge to empty the bladder increases. The skin in the groin area becomes irritated, itching and redness appear. Gradually, itching covers the stomach, armpits, elbows and knees. Patients with diabetes have an increased appetite; patients begin to feel hungry within 1-2 hours after eating. Despite the increased caloric content of food, weight remains the same or decreases, since glucose is not absorbed, but is lost in urine. [3, 7, 8, 11]

Patients also complain of fatigue, fatigue, dry skin prone to rashes, and fungal infections. Bruises easily appear on the body, wounds and abrasions take a long time to heal. Blood pressure is elevated, and headaches and dizziness are common. [3, 6, 9]

The difficulty of identifying non-insulin-dependent diabetes mellitus is explained by the absence of pronounced symptoms in the initial stages of the disease. Diagnosis begins with clarifying complaints and collecting anamnesis, identifying risk factors. The diagnosis is confirmed after receiving laboratory diagnostic results. Specific tests include: fasting glucose, oral glucose tolerance test, glycated hemoglobin.

Fasting glucose refers to the blood glucose level in the morning after first fasting for at least 8 hours and no more than 14 hours. A normal fasting blood glucose level is 3.3–5.5 mmol/l. On the eve of the study, it is necessary to exclude increased psycho-emotional and physical stress (sports training), and alcohol intake.

Oral glucose tolerance test - determines the level of blood plasma glucose on an empty stomach and 2 hours after a carbohydrate load. This test is used to diagnose diabetes mellitus,

gestational diabetes mellitus and prediabetes (impaired fasting glucose and impaired glucose tolerance).

Glycated hemoglobin is a specific compound of red blood cell hemoglobin with glucose, the concentration of which reflects the average glucose content in the blood over a period of about three months. The glycated hemoglobin test is used to monitor the condition of patients diagnosed with diabetes mellitus. It helps assess how effectively glucose levels are regulated during treatment. The resulting indicator is measured as a percentage. Patients suffering from diabetes should strive to keep the level of glycated hemoglobin no higher than 7%.

Treatment of type 2 diabetes includes: proper nutrition, adequate physical activity, the use of glucose-lowering medications, self-monitoring of glycemia, and education in the principles of disease management.

Biguanides and thiazolidinediones are most often used in the treatment of type 2 diabetes. These drugs reduce insulin resistance of cells, the absorption of glucose in the gastrointestinal tract and its production by the liver. For greater effectiveness, they are combined with drugs that improve insulin activity: DPP-4 inhibitors, sulfonylurea derivatives, meglitinides. In case of insufficient effectiveness, insulin therapy is used. [1, 12, 13]

Treatment usually begins with monotherapy, then switches to combination treatment and, if ineffective, to insulin therapy.

Thus, type 2 diabetes mellitus has many serious and life-threatening complications, so the disease requires high-quality therapy and regular medical examination. With timely diagnosis and adequate therapy, it is possible to minimize the negative consequences of the disease and return to a normal, fulfilling life.

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