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CAUSES AND INITIAL SYMPTOMS OF DIABETES, PREVENTION AND DIAGNOSIS OF DIABETES, EARLY DETECTION AND TREATMENT OF DIABETES.

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Abstract: This article provides information about diabetes, its causes, changes and complications that occur in the cardiovascular system due to diabetes. In the article, the important factors of the work being done on the prevention and diagnosis of diabetes mellitus, early detection and treatment of diabetes mellitus, which is one of the topical issues of the present day, were explained. The opinions of great doctors about the prevention of diabetes are given. Objective and subjective factors of diabetes are explained. Information is given about the work carried out in Uzbekistan related to the prevention and diagnosis of diabetes, early detection and treatment of diabetes.

Key words: endocrine diseases, hyperglycemia, carbohydrate, fat, protein, insulin, genetic factors, paresis, somatostatin, glucose, potassium iodide.

Diabetes is the most common chronic disease in developed countries today. The number of such patients is increasing every year in all countries of the world. Diabetes is one of the endocrine diseases, which is caused by a complete or partial deficiency of the insulin hormone. As a result, hyperglycemia is observed in the blood - a continuous increase in the amount of glucose in the blood. The disease is characterized by chronic continuation and disruption of metabolic processes in the body (carbohydrate, fat, protein, mineral and water-salt metabolism). There are 2 types of diabetes. Type 1 occurs mainly in adolescents and children with an absolute lack of insulin produced by the pancreas. In type 2, the increase in blood sugar is caused by insulin resistance. The normal amount of sugar in the blood in the human body
3.3-5.5 mmol/l per meal. What changes in the body of patients with diabetes lead to the development of cardiovascular diseases?
AG - high blood pressure 2. Insulin resistance - low sensitivity of tissues and cells to insulin 3. Genetic factors - genetic predisposition 4. Obesity 5. Inactivity Diabetic patients are mainly thirsty, often Symptoms such as excessive urination, weight loss, lack of appetite, and weakness are disturbing. Patients with the above-mentioned complaints should be examined by an endocrinologist immediately. In modern medicine, the severity of the disease and the presence or absence of complications are taken into account when choosing drugs. For example, if the patient lacks insulin due to heredity at a young age, insulin is sent to replace it. Elderly and overweight people need to follow a diet according to the doctor's recommendation when there is a relative lack of insulin. Blood sugar lowering agents are used. A diet is often prescribed when the disease subsides. Carbohydrates are consumed less, instead of them you can eat meat, black bread and other products. The amount of fatty foods is limited. When the disease worsens, the patient is not given butter and other fatty products. Almost 20 percent of food calories should consist of proteins. Food products consumed by a sick person should be rich in vitamins, especially vitamins of group C and B. The patient should eat food in portions. Patients who follow the doctor's strict supervision must strictly follow the daily routine and dietary recommendations, and must come to the laboratory examination on time. Today, diabetes is considered a natural disease. According to experts of the World Health Organization, diabetes is a metabolic disorder.
Diabetes (from the Greek diabaino - I will pass, I will pass) means. It is caused by observation of an irreversible condition in a certain part of the pancreas. The pancreas is located behind the stomach, in front of the 1st, 2nd lumbar vertebrae. Length 10-15 cm, thickness 2-3 cm, weight

70-100 grams. The pancreas consists of 3 parts: head, body, tail. The main part of the pancreas is the exocrine secretory apparatus, which mainly produces the main parts of the pancreatic juice. 1-3% of the gland is the endocrine part, that is, islets of Langerhans (up to 1-1.5 million). Each islet has a diameter of 150 µm. There are 80 to 200 cells in one islet. There are several types of cells in the islets of Langerhans: A - glucagon makes up 25%; B - located in the center of insulin, makes up 60-70%; D - somatostatin makes up 10%, the rest - 5%, produces VIP (Visoactive interstitial polypeptide, gastrointerstitial polypeptide). Insulin is a highly active chemical substance (hormone) that accumulates and is grouped into islets. A person uses energy to live, move and work.

It gets energy from food. Energy is produced as a result of metabolism. Carbohydrates and fats are the main source of energy. Bread, cereals, dairy products, fruits and vegetables contain a lot of carbohydrates. A part of the glucose entered through food is absorbed into the cells with the help of insulin. Insulin can be compared to a key that opens a cell lock. Part of the glucose used for energy production is converted into glycogen with the help of insulin and is stored in the liver and muscles as a reserve of energy. When glucose does not come from outside between meals, glucose is produced from glycogen and it is used for energy production. If a certain amount of glucose accumulates in the liver and muscles, insulin helps it turn into fat. When the blood sugar level rises, beta cells in a healthy person increase insulin production and lower the blood sugar level by storing it in the liver. When insulin is not produced enough or does not work well enough, blood sugar levels rise. And insulin is not produced enough when the beta cells are damaged. Because beta cells are non-regenerative cells. These cells can become inhibited and cannot be restored as a result of severe stress, a lot of compression, severe fear. As a result, insulin release decreases. This leads to an increase in the amount of sugar in the blood. The normal amount of sugar in the blood of a healthy person is 80-120 mg%.

In case of diabetes, its amount can increase to 150-250 mg% and even more. When the amount of sugar in the blood is normal, it is not excreted in the urine through the kidneys, that is, there is absolutely no sugar in the urine of a healthy person. When the amount of sugar in the blood exceeds 140-150 mg%, it begins to be excreted in the urine. At such a time, a person becomes thirsty quickly and consumes a lot of water. Carbohydrates in the eaten food are not absorbed by the cells and tissues, but are excreted in the urine. Otherwise, the fat reserves under the skin will break down and turn into glucose, and even the protein and fat substances in the cells and tissues will turn into glucose, pass into the blood and be excreted with urine. As a result, the patient becomes weak, weak, and the ability to work decreases. Diabetes occurs in 15% of the population of our republic, they regularly eat diet food and drink drugs that reduce the amount of sugar in the blood. Regardless of the medications taken, a person with diabetes should follow a diet, follow a healthy lifestyle, give up harmful habits, engage in light physical work or physical education, observe personal hygiene, take care of himself. In order to be able to choose a profession, and most importantly, to receive reasonable treatment, to maintain his ability to work and health for a long time, he should have medical knowledge and culture about this disease.

High blood sugar can lead to serious complications, which can sometimes take years to appear. These complications are called late complications and they damage vital organs such as eyes, nerves, kidneys, and blood vessels. Sometimes a late complication can be detected even in diabetes that is detected for the first time. Only normalization of blood sugar can prevent the development of late complications of diabetes. To determine the presence of complications of diabetes, it is necessary to undergo a full examination. The following complications can be observed in diabetes: Retinopathy 1,2; nephropathy 1.3; peripheral polyneuropathy without severe pain syndrome and trophic ulcers. 2.3 of retinopathy for severe level; 4.5 degrees of nephropathy, severe pain syndrome of peripheral nephropathy, trophic ulcers, encephalopathy,

severe degrees of vegetative neuropathy, tendency to ketoacidosis, repeated comatose states are characterized by an unstable course. When the mentioned complications are observed, the importance of insulin and blood sugar is not taken into account to determine the severity. The following main factors play a decisive role in the development of diabetes. The first factor is a genetic predisposition to diabetes, the fact that both parents are sick with diabetes is the reason for the development of diabetes in 65-70% of cases.

The second factor is excess body weight - obesity, which causes diabetes in older people. It is known that the human body stops growing at the age of 25. For this reason, body weight at the age of 25 was accepted as normal weight. Everyone should be able to maintain the weight of this age until the end of life. The pancreas, which is already adapted to deliver insulin to the weight of this age, naturally cannot deliver more than this. As a result, sugar metabolism goes out of control. Due to the lack of insulin, excess sugar that is not used or absorbed by the body accumulates first of all in the blood. The amount of sugar in the blood increases and exceeds its normal limit and begins to be excreted through urine. The more sugar accumulates in the blood, the more water you drink and the more you urinate. Thus, the main symptoms of diabetes are known as drinking a lot of water (thirst) and urinating a lot. At the same time, poor absorption of sugar by the body due to low production or lack of insulin also causes the patient to feel hungry. But the patient cannot eat a lot of food, because the food is not digested due to the lack of insulin, the patient begins to lose weight.

It can be seen that all symptoms of diabetes mellitus are interconnected and mediated by a single pathophysiological chain. This chronic, long-lasting disease damages important organs, tissues and blood vessels and shows them its complications. First of all, this is seen in the activity of the nervous system. Limbs ache, ache or heat up. The perception of pain decreases, a complication of the disease called polyneuropathy develops. It destroys the kidney function, as a result, the kidneys are unable to perform their tasks. Eyesight decreases, as a result of a decrease in the body's immune system, purulent wounds on the skin, serious diseases (painless myocardial infarction, etc.), and blackheads develop on the legs. As you can see, diabetes is dangerous with its complications.

By the decision of the President on April 19, the national program for improving endocrinology assistance to the population of the Republic in 2019-2021 was approved.

The document was adopted in order to form a system of specialized, effective and modern endocrinology care, to further improve measures for the prevention of diabetes and other endocrine diseases and their early detection, and to increase the quality and capabilities of providing specialized highly qualified endocrinology care to the population.

The following are the main directions of the National Program:

• radical improvement of the situation regarding the prevention of endocrine diseases, their early detection and coverage of the population with preventive measures;

• creation of an online registry of patients with diabetes, introduction of clinical approaches aimed at reducing the occurrence and development of chronic complications of diabetes into the practice of treating patients, as well as improving the quality of life of patients;

• expanding the types of medical services provided by organizing endocrine surgery, diabetic ankle, diabetic nephropathy and resuscitation departments in regional endocrinology dispensaries and branches;

• implementation of comprehensive measures to provide children, adolescents and pregnant women diagnosed with diabetes with analogue insulin and insulin injection devices and self-monitoring tools;

training of patients with endocrine diseases and their family members in proper management and control of diseases, involving professional instructors on the basis of regional self-control schools;

• improvement of the system of training, retraining and advanced training of medical personnel of endocrinology institutions, as well as strengthening their personnel potential;
• to expand the scope of local scientific research in the field of endocrinology, international cooperation, and to apply the world's best practices and scientific developments to health care practice;
• modernization of endocrinology institutions and further strengthening of their material and technical base by building new endocrinology institutions, reconstructing and overhauling existing ones, equipping them with modern diagnostic and special medical equipment, tools and inventories (additional equipment).
The program envisages the centralized purchase and distribution of analogue insulins and self-monitoring tools (test strips) for children and adolescents with type I diabetes through all regional endocrinology dispensaries.
Iodine deficiency diseases are prevented among groups of the population with a high risk of contracting the disease (children, adolescents, pregnant and lactating women) through the continuous supply of potassium iodide preparations.

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