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GESTATIONAL DIABETES MELLITUS AND ITS TREATMENT

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Abstract : The article deals with the diagnosis and treatment of diabetes mellitus in pregnant women. The importance of phytotherapy in the complex treatment of gestational diabetes mellitus and the prevention of its complications is discussed. Phytotherapy in combination with a diet can effectively correct carbohydrate metabolism and reduce the dose of insulin and synthetic antidiabetic drugs.

Key words : diabetes mellitus, pregnancy, phytotherapy.

introduction. According to the classification of the World Health Organization, " gestational diabetes" is diabetes mellitus, as well as impaired glucose tolerance, manifested during pregnancy. Gestational diabetes mellitus, according to the literature, is diagnosed in 5-7% of pregnant women. Its cause is the reduced sensitivity of cells to their own insulin (insulin resistance), due to the high content of pregnancy hormones in the blood. Gestational diabetes in most cases develops between 16 and 32 weeks of pregnancy. Carbohydrate metabolism disorders identified during this period indicate previously unnoticed pregestational (" pre-pregnant ") diabetes. After childbirth, blood glucose levels often return to normal. However, exclude the possibility of developing type 1 or type 2 diabetes during pregnancy. When analyzing the data obtained as a result of multiple studies, it was found that more than 50% of pregnant women who have had gestational diabetes develop true diabetes mellitus later in life. Risk factors for the development of gestational diabetes mellitus are: overweight pregnant woman, the age of the pregnant woman over 30 years, the presence of diabetes mellitus in the next of kin, the birth of a large previous fetus, a burdened obstetric history, belonging to an ethnic group at increased risk (Spanish, African American , Asian, Native American).

Main part. Pregnancy aggravated by diabetes can end in preterm birth , or stillbirth. There is a high risk of developing preeclampsia (with diabetes it develops more often and earlier - up to 30 weeks), hydramnios , and consequently, placental insufficiency and fetal malnutrition. It is possible to develop diabetic ketoacidosis (a condition in which there is a sharp increase in the level of glucose and the concentration of ketone bodies in the blood), infections of the genital tract, which are recorded 2 times more often and cause infection of the fetus and premature birth. It is also possible the progression of microangiopathies with an outcome in visual impairment, kidney function, blood flow disorders in the vessels of the placenta, and others. A woman may develop weakness in labor, which, in combination with a

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clinically narrow pelvis and a large fetus, will lead to the inevitability of delivery by caesarean section.

Women who have had gestational diabetes are more likely to develop infectious and other complications in the postpartum period. Violations of carbohydrate metabolism in the mother's body pose a danger to the normal intrauterine development of the fetus. Features of carbohydrate metabolism between mother and child are such that the fetus receives glucose from the mother, but does not receive insulin. Thus, hyperglycemia, especially in the first trimester of pregnancy, when the fetus does not yet produce its own insulin, provokes the formation of various malformations of the child before the birth of the fetus. After 12 weeks, when the body of the unborn baby produces its own insulin, hyperinsulinemia develops , which threatens the development of asphyxia and traumatism during childbirth, respiratory disorders (respiratory distress syndrome) and hypoglycemic conditions in newborns [1, 2].

The first step in diagnosing gestational diabetes is to assess the risk of developing it. When a woman is registered with a antenatal clinic, a number of indicators are assessed, for example, the age and weight of the pregnant woman, obstetric history (the presence of gestational diabetes during previous pregnancies, the birth of children weighing more than 4 kg, stillbirth, and others), family history (the presence of diabetes in relatives) and so on. The second point is blood sampling to determine the level of sugar several times during pregnancy. If at least once the glucose content exceeded 5 mmol / l, a further examination is carried out, namely a glucose tolerance test.

When conducting a test with a load of 50 g of glucose, the level of glycemia is assessed on an empty stomach and after 1 hour. If fasting glucose exceeds 5.3 mmol / l, and after 1 hour the value is higher than 7.8 mmol / l, then a test with 100 g of glucose is necessary. Diagnosis of gestational diabetes mellitus is set if fasting glucose is more than 5.3 mmol / l, after 1 hour - above 10.0 mmol / l, after 2 hours - above 8.6 mmol / l, after 3 hours - above 7.8 mmol / l l. An increase in only one of the indicators does not give grounds for making a diagnosis. In this case, the test should be repeated again after 2 weeks. Thus, an increase in 2 or more indicators indicates diabetes. If the results of the study are normal, then the test is repeated at 24-28 weeks of pregnancy, when the hormonal background changes. At earlier stages, GDM is often not detected, and diagnosis after 28 weeks does not always prevent the development of complications in the fetus [1, 2]. The main condition for managing a pregnancy complicated by diabetes (both gestational and its other forms) is maintaining blood glucose levels within the normal range (3.5-5.5 mmol / l). In 70% of cases, gestational diabetes is corrected by diet, since insulin biosynthesis occurs and there is no need for insulin therapy [3].

Basic principles of diet therapy:

1. The daily ration must be divided between carbohydrates, fats and proteins -35-40%, 35-40% and 20-25%, respectively.

2. Calorie content in overweight conditions should be 25 kcal per 1 kg of weight or 30-35 kcal per 1 kg with normal weight. Overweight women need to reduce their calorie intake.

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3. Reduce the amount of fat consumed by enriching the diet with fiber (fruits and vegetables) and proteins up to 1.5 g / kg. In the event that it is not possible to correct the level of glycemia with one diet, insulin therapy is necessary, which is calculated and adjusted by the attending physician.

Phytotherapy is one of the most common and effective adjuvant methods in the treatment of both type I and type II diabetes. If the disease can be detected in the early stages, then phytotherapy in combination with diet and dosed physical activity can stabilize the condition of many patients without drug treatment. About 200 plants containing inulin, inosine, galenin have a hypoglycemic effect . They have an alkalizing effect, and in a weakly alkaline environment, glucose is converted into mannose or fructose, which are cleaved without insulin, which reduces the need for it [4, 5]. Medicinal plants have a number of advantages over synthetic drugs: they are low toxic , have a mild effect, can be used for a long time without significant side effects, especially allergic reactions, and are well combined with medicinal substances, enhancing their therapeutic effect.

Some plants also have immunostimulatory effect, thanks to which it is possible to prevent the development of a number of complications that provoke diabetes. Biologically active substances contained in medicinal plants have anti-inflammatory, choleretic, sedative, tonic effect. As a rule, for the treatment of diabetes, multicomponent fees are used that have a complex effect on the body. The low concentration of active substances does not allow the use of phytotherapy as a method that gives a quick result, but the softness of the impact, low toxicity of infusions and decoctions makes it possible to choose a treatment that does not give noticeable side effects. Despite this, phytotherapy, like other methods of treating diabetes, should be prescribed by a doctor and carried out under his supervision, which allows you to evaluate its effectiveness and, if necessary, make adjustments. Courses of phytotherapeutic treatment are calculated from 2 weeks to 6 months, depending on the condition of the patient and the plants used, after which it is recommended to change the composition of the herbal collection. Most often, for the treatment of diabetes, fees and decoctions are used, which include Manchurian Aralia, Eleutherococcus prickly, motherwort, birch leaves, currants, strawberries, mint, nettles, plantain, ginseng root, walnut, burdock roots, corn stigmas, flax seeds , rose hips, and hawthorn [6].

Antidiabetic herbal preparations often include herbal preparations that have angioprotective properties such as standardized water-alcohol extract from horse chestnut fruits (Aescusan , Esflazid), containing flavonoids , saponins and other substances. Aescusan reduces capillary permeability, increases the tone of venous vessels, improves metabolic processes and reduces inflammation in the walls of blood vessels, and thus prevents the development of diabetic angiopathy , which can lead to disorders blood circulation in the limbs and vessels of the placenta, nephropathy and retinopathy .

In addition to the basic fees, you can prescribe 2-3 times a year, courses lasting 1-1.5 months, adaptogens: preparations of ginseng, eleutherococcus or lure (in the absence of contraindications - high blood pressure and tachycardia, both constant and paroxysmal).

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Adaptogens have a positive effect on the activity of the central nervous system, increase the tone of the body, and have some hypoglycemic effect. Adaptogens especially indicated for general weakness , immunodeficiency, low blood pressure.

Conclusions . Herbal treatment for diabetes is carried out constantly, without interruptions, the fees are alternated if possible. As a result, blood sugar levels are lowered, which makes it possible to reduce the doses of antidiabetic drugs or even do without them. Phytotherapy in many cases protects diabetic patients from damage to the cardiovascular system, kidneys and liver, diabetic neuro- and retinopathy or delays their appearance.

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