Gestational Diabetes

**Definition:** Gestational diabetes is a type of diabetes that occurs in women during pregnancy and usually resolves after the baby is born. A condition in which high blood sugar is seen for the first time during pregnancy. Gestational diabetes occurs in 3% to 6% of pregnant women and usually begins in the second trimester of pregnancy.

**Etiology:** Hormonal changes and weight gain are part of a healthy pregnancy. But making these two changes makes it difficult for the body to make the hormone insulin. When this happens, the body does not get the energy it needs from the food it eats. History of gestational diabetes, obesity, a strong family history of diabetes, as well as an increased risk of developing diabetes are associated with maternal age.

**Risk factors:**

- Obesity (BMI over 30)
- The presence of sugar in the urine
- History of giving birth of big baby or infancy with congenital anomalies, stillbirth without cause
- Family history of diabetes
- History of gestational diabetes in previous pregnancies
- Chronic hypertension
- Mother over 30 years old

Some women do not have any of the mentioned factors. For this reason, blood sugar measurement (GTT test) is done for all women in 24 to 28 weeks of pregnancy.

**Clinical symptoms:** Clinical symptoms depend on the level of maternal hyperglycemia. Clinical symptoms of diabetes include "3P": polyuria, polydipsia, and polyphagia. Excessive fluid loss due to osmotic diuresis leads to polyuria (increased urination) and polydipsia (excessive thirst). As a result of insulin deficiency and breakdown of proteins and fats, the patient's appetite increases (polyphagia).

**Complications of gestational diabetes:**

- Fetal macrosomia that can lead to dystocia.
- The risk of polyhydramnios, umbilical cord prolapse, and amniotic fluid embolism increases.
- Bacterial infections increase. (Especially asymptomatic bacteriuria, which is three times more common in these women.)
- Pregnancy blood pressure (eclampsia) increases.
- The risk of hypoglycemia and hypocalcemia and hyperbilirubinemia in the newborn increases.
- The probability of preterm delivery increases two to three times. The possibilities of atony and postpartum hemorrhage also increase.
- Perinatal mortality also increases.
The baby is more likely to have respiratory distress.

**Treatment:** Strict control of maternal plasma glucose is required through control of diet physical activity and determination of insulin.

They require 30 to 35 kcal / kg of calories. (About 2500 kcal per day), which is divided as follows:

- Carbohydrate 40% to 45%
- Protein 12% to 20%
- Fat 40%

A general recommendation is to limit carbohydrate intake at breakfast. Eating smaller and more meals helps control blood sugar without the need for injectable insulin.

Regular cardiac exercise, such as walking or swimming, helps control blood sugar, especially after meals. Patients are advised to walk.

If blood sugar is not controlled with the mentioned measures, insulin therapy should be started. Insulin requirements decrease in the first trimester, increase in the second trimester, and decrease again in the third trimester. Regular insulin (fast-acting) and NPH (moderate-acting) are used for combination therapy.

**Nursing measures:**

- Monitoring a pregnant mother's blood sugar
- Controlling hemoglobin A1C can show the average amount of glucose in the bloodstream over the past 4-8 weeks.
- The optimal amount of glycosylated hemoglobin before pregnancy is considered at the maximum normal value or in the range of 3 standard deviations from the normal average. Otherwise inform the doctor.
- Monitoring glucose carefully is essential to educate the patient on how to control blood sugar and follow-up care, as well as to assess the extent of vascular disease and to assess gestational age. It is forbidden to take oral hypoglycemic drugs as prescribed by your doctor and should be replaced by insulin.
- Blood sugar-lowering pills can cause fetal hyperinsulinemia and abnormalities, especially in the ear.

On the day of delivery, the NPH insulin dose should be reduced or eliminated as directed by your doctor. And use only regular insulin and careful monitoring of blood sugar because the need for insulin is reduced during childbirth.

If you have any questions or ambiguities, call the following number:

023-33222266, Obstetrics and Gynecology ward of Motamedi Hospital