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Baby of obstetric diabetic mother

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Abstract

Diabetes is a disease that affects how your body turns food into energy. There are three main types of diabetes: type 1, type 2, and gestational diabetes. With type 1 diabetes, the body doesn't produce insulin. Insulin is a hormone that helps blood sugar get into the cells to be used for energy. With type 2 diabetes, the body produces insulin, but does not use it well.

Gestational diabetes is a type of diabetes that develops during pregnancy. In the United States, about 1% to 2% of pregnant women have type 1 or type 2 diabetes and about 6% to 9% of pregnant women develop gestational diabetes. Diabetes during pregnancy has increased in recent years. Recent studies found that from 2000 to 2010, the percentage of pregnant women with gestational diabetes increased 56% and the percentage of women with type 1 or type 2 diabetes before pregnancy increased 37%. Diabetes in pregnancy varies by race and ethnicity. Asian and Hispanic women have higher rates of gestational diabetes and black and Hispanic women have higher rates of type 1 or type 2 diabetes during pregnancy.

Keywords: Baby, pregnancy, diabetes

Introduction

A fetus (baby) of a mother with diabetes may be exposed to high blood sugar (glucose) levels throughout the pregnancy. There are two types of diabetes that occur in pregnancy:

- **Gestational diabetes:** This term refers to a mother who does not have diabetes before becoming pregnant but develops a resistance to insulin because of the hormones of pregnancy.
- **Pre gestational diabetes:** This term describes women who already have insulin-dependent diabetes and become pregnant.

With both types of diabetes, there can be complications for the baby. It is very important to keep tight control of blood sugar during pregnancy.

What causes diabetes in pregnancy?

- The placenta supplies a growing fetus with nutrients and water. It also produces a variety of hormones to maintain the pregnancy. Some of these hormones (estrogen, cortisol, and human placental lactogen) can block insulin. This usually begins about 20 to 24 weeks into the pregnancy.
- As the placenta grows, more of these hormones are produced, and insulin resistance becomes greater. Normally, the pancreas is able to make additional insulin to overcome insulin resistance, but when the production of insulin is not enough to overcome the effect of the placental hormones, gestational diabetes results.
- Pregnancy also may change the insulin needs of a woman with preexisting diabetes. Insulin-dependent mothers may require more insulin as pregnancy progresses.

Who is affected by diabetes in pregnancy?

About 5 percent of all pregnant women in the U.S. are diagnosed with gestational diabetes. Gestational diabetics make up the vast majority of pregnancies with diabetes. Some pregnant women require insulin to treat their diabetes.

Why is diabetes in pregnancy a concern?

The mother's excess amounts of blood glucose are transferred to the fetus during pregnancy. This causes the baby's body to secrete increased amounts of insulin, which results in increased tissue and fat deposits. The infant of a diabetic mother is often larger than expected for the gestational age.

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The infant of a diabetic mother may have higher risks for serious problems during pregnancy and at birth. Problems during pregnancy may include increased risk for birth defects and stillbirth. It also increases the risk for birth defects, including problems with the formation of the heart, brain, spinal cord, urinary tract, and gastrointestinal system. Unlike insulin-dependent diabetes, gestational diabetes generally does not cause birth defects. Women with gestational diabetes generally have normal blood glucose levels during the critical first trimester when baby's organs form.

A newborn infant of a diabetic mother may develop one, or more, of the following

- **Hypoglycemia:** Hypoglycemia refers to low blood glucose in the baby immediately after delivery. This problem occurs if the mother's blood glucose levels have been consistently high, causing the fetus to have a high level of insulin in its circulation. After delivery, the baby continues to have a high insulin level, but it no longer has the high level of glucose from its mother, resulting in the newborn's blood glucose level becoming very low. The baby's blood glucose level is checked after birth, and if the level is too low, it may be necessary to give the baby glucose intravenously.
- **Macrosomia:** Macrosomia refers to a baby that is considerably larger than normal. All of the nutrients the fetus receives come directly from the mother's blood. If the maternal blood has too much glucose, the pancreas of the fetus senses the high glucose levels and produces more insulin in an attempt to use this glucose. The fetus converts the extra glucose to fat. Even when the mother has gestational diabetes, the fetus is able to produce all the insulin it needs. The combination of high blood glucose levels from the mother and high insulin levels in the fetus results in large deposits of fat which causes the fetus to grow excessively large.
- **Birth injury:** Birth injury may occur due to the baby's large size and difficulty being born.
- **Respiratory distress (difficulty breathing):** Too much insulin in a baby's system due to diabetes can delay surfactant production which is needed for lung maturation.

Treatment for infants of diabetic mothers

Treatment of a baby born to a diabetic mother often depends upon the control of diabetes during the last part of pregnancy and during labor. Specific treatment will be determined by the baby's physician based on:

- Baby's gestational age, overall health, and medical history
- Extent of the condition
- Baby's tolerance for specific medications, procedures, or therapies
- Expectations for the course of the condition
- Your opinion or preference

Treatment may include

- **Monitoring of blood glucose levels**
Blood may be drawn from a heel stick, with a needle in the baby's arm, or through an umbilical catheter (a tube placed in the baby's umbilical cord).
- **Giving the baby a quick source of glucose**
This may be as simple as giving a glucose and water

mixture as an early feeding. Or, the baby may need glucose given intravenously. The baby's blood glucose levels are closely monitored after treatment in case hypoglycemia occurs again.

- **Checking for hypocalcemia** (low calcium levels)
- **Giving oxygen or using a breathing machine** (if respiratory distress occurs)
- **Care for any problems arising from a birth injury**
- **Care for any problems that occur with a birth defect**

Prevention of problems associated with infants of diabetic mothers

Prenatal care is essential to a healthy outcome when a mother has diabetes in pregnancy. Careful diet management, blood glucose monitoring, and insulin therapy can help keep a mother's blood glucose levels at normal levels and decrease many of the risks to her baby.

References

1. <https://www.cdc.gov/reproductivehealth/maternalinfanthealth/diabetes-during-pregnancy.htm#:~:text=Diabetes%20during%20pregnancy%E2%80%94including%20type,%2C%20stillbirth%2C%20and%20preterm%20birth.>
2. Dutta DC. Textbook of Gynecology, 8th ed. Calcutta: New Central Book Company; c2001.
3. Jacob Annamma. A comprehensive textbook of Midwifery and Gynecological Nursing, 4rd edition. New Delhi: Jaypee Medical Publishers; c2012.
4. Neil K Kaneshiro, David Zieve, Isla Ogilvie ADAM. Editorial team, eds. (December 4, 2013). Neonate. U.S. National Library of Medicine. Retrieved January 16, 2016.
5. <http://reference.medscape.com/medline/abstract/17571356>
6. <http://reference.medscape.com/medline/abstract/10685200>
7. <http://www.healthy.net/scr/article.aspx?Id=1058>