

Problem Pregnancies and Birth Defect

FACTS:

- About 150,000 babies are born each year with birth defects.
- The parents of one out of every 28 babies receive the frightening news that their baby has a birth defect
- There are over 4,000 known birth defects
- Birth defects are the leading cause of death in the first year of life

What is a birth defect?

An abnormality of structure, function or body metabolism (inborn error of body chemistry) present at birth that results in physical or mental disability or is fatal.

What causes birth defects?

Both genetic and environmental factors can cause birth defect. However, the causes of about 60% of birth defects are currently unknown.

A single abnormal gene can cause birth defects. Every human being has about 100,000 genes that determine traits like eye color, hair, etc.

Can birth defects be prevented?

While the causes of most birth defects are not known, there are a number of steps a woman can take to reduce her risk of having a baby with a birth defect.

- Visit a health care provider for a pre-pregnancy check up. Especially if a woman has health problems
- When pregnant take daily multivitamin containing 400 mg of the B-vitamin folic Acid
- Avoid alcohol, drugs, smoking, prescription or over-the-counter medication with out checking with her health care provider.

Can some birth defects be diagnosed before birth?

Some birth defects can be diagnosed before birth. Some prenatal tests that can be taken are:

1. Ultrasound
2. Amniocentesis
3. Chronic villus sampling

Can birth defects be treated before birth?

Advances in prenatal therapy now make it possible to treat some birth defects before birth.

- Prenatal surgery – urinary-tract blockages, rare tumors in the lungs, spina bifida, ph disease,

Amniocentesis – prenatal test

- A small sample of amniotic fluid surrounding the fetus is removed and examined to detect certain birth defects (Rh disease, and strength of the lungs of the fetus)
- Done in the second trimester - A thin, hollow needle inserted through the woman's belly and uterus and some of the amniotic fluid is removed.

Chronic Villus Sampling

- A prenatal test that takes a tiny tissue sample from outside the sac where the fetus develops.
- CVS requires taking a small piece of the chorionic villi, which are wisps of tissue that attach the pregnancy sac to the wall of the uterus. The villi contain the same tissue makeup as the fetus.
- First, the vagina and cervix are thoroughly cleansed with an antiseptic.

Then, using ultrasound as a guide, a physician inserts a thin tube through a woman's vagina and cervix to the villi, and uses gentle suction to remove a small sample.

Ultrasounds

A technique that uses sound waves to show a picture of a baby (fetus) in the womb.

Ultrasound works by bouncing sound waves off the developing fetus. Echoes from the waves are converted into an image – called a sonogram – on a monitor. The technique is sometimes sonography.

Used for the following reasons:

1. Rule out an ectopic pregnancy
2. Confirm more than one baby
3. Verify due date
4. Evaluate fetal growth
5. Identify possible miscarriage
6. Determine causes of bleeding
7. Help perform other prenatal diagnostic tests
8. Diagnose certain birth defects
9. Check fetal well-being late in pregnancy
10. Help to select delivery method

Placenta Conditions

The placenta is an unborn baby's lifeline. It forms from the same cells as the embryo, and attaches to the inner wall of the uterus. The placenta forms connections with the mother's blood supply, from which it transfers oxygen and nutrients to the baby. It also connects with the baby's blood supply, from which it removes wastes and transfers them to the mother's blood (her kidneys then dispose of the waste.)

Produces hormones that play a role in triggering labor and delivery, and protects the unborn baby from infections and potentially harmful substances.

- Placenta Abruption – (unknown cause) the placenta peels away from the uterine wall partially or completely before delivery. It can deprive the baby from oxygen and nutrients and cause bleeding in the mother that can endanger the mother and baby. If it is severe c-section delivery follows.
- Placenta Previa – low-lying placenta that covers part or all of the inner opening of the cervix. This placement of the placenta can block the baby's exit from the uterus. And, as the cervix begins to thin and dilate in preparation for labor, blood vessels that connect the abnormally placed placenta to the uterus may tear, resulting in bleeding. During labor and delivery, bleeding can be severe, endangering mother and baby. As with placental abruption, this can result in a premature baby. A woman diagnosed with placenta previa usually stays in the hospital until delivery and has a c-section.
- Placenta Accreta – placenta implants too deeply into the uterine wall. After delivery, if the placenta does not completely separate from the uterine lining, dangerous bleeding can occur after vaginal delivery. The placenta usually has to be surgically removed.

Newborn Screening Tests

Before leaving the hospital certain newborn tests are given to eliminate certain birth defects

Neonatal Death

In 1996 about 19,000 babies died in the first month of life

Most common causes

- The baby was born with a birth defect – 25% of neonatal deaths
Heart defects – 1/3

Chromosomal abnormalities

Brain and central nervous system

- Premature birth – 20% of neonatal deaths
 - Respiratory distress syndrome – immature lungs
 - Bleeding in the brain

Stillbirth – after 20 weeks of pregnancy

Most common causes:

Placenta problems

Birth defects

Growth restrictions

Infections

Miscarriage – occurs prior to 20 weeks of pregnancy

Most miscarriages occur when pregnancy is not developing normally.

1st trimester- **chromosomal abnormalities in the fetus**, hormonal problems, infections, and health problems of the mother.

2nd trimester – often caused by uterus problems. Misshaped uterus, weakened cervix that dilates prematurely, chromosomal abnormalities, immune system problems,

Fitness for two

Low Birthweight

Folic Acid

STUDENT REPORTS

Assign reports out to students to prepare.