Echogenic bowel

This leaflet is to help you understand what Echogenic bowel is, what tests you need and the implication of being diagnosed with Echogenic bowel your baby and your family.

What is echogenic bowel of the fetus?

Echogenic bowel is an ultrasound finding where the fetal intestines appear brighter than expected. This finding can be seen in 0.2 -1.4% of all pregnancies.

How is echogenic bowel detected?

Echogenic bowel can be detected by prenatal ultrasound, usually around 20 weeks of pregnancy at the time of the anatomy ultrasound. Typically, the bowel should be the same gray colour as the liver, but sometimes the bowel appears as white as bone. When this occurs, it is called “echogenic”.

What causes echogenic bowel?

Echogenic bowel can be a normal finding on ultrasound and it is often associated with normal, healthy babies. However, there are several medical problems that can cause the bowel to appear bright on ultrasound.

Abnormal bowel movement:

Before the end of the first trimester, the fetus starts swallowing amniotic fluid, which is moved through the fetal gut by muscles in the intestines. Sometimes this fluid moves slower than usual or not at all if there is a blockage in the intestines. When this happens, the bowel content becomes thickened, giving it a bright appearance. In cases of bowel obstruction, the initial presentation may be echogenic bowel and only over time does the bowel obstruction become obvious when peristalsis and dilated loops of bowel are seen. This requires follow scanning. The diagnosis of bowel obstruction may definitively be made only in the third trimester.

Bleeding into the amniotic fluid:

Sometimes bleeding occurs during pregnancy. This can lead to blood in the fluid surrounding your baby. While it is not harmful for the baby to swallow blood in the amniotic fluid, the blood cells can appear bright within the stomach and bowel on ultrasound.

Cystic fibrosis

Cystic fibrosis is a genetic disease that can affect the lungs and bowels, causing thickened mucus to build up in those organ systems. It can be difficult for the baby to have the first bowel movement after he or she is born, also known as meconium ileus. In order for a baby to have cystic fibrosis, it must have two copies of the abnormal cystic fibrosis gene. One abnormal gene copy is inherited from each parent, who are carriers for the disease (meaning they are healthy but have one normal gene and one abnormal gene).

Chromosomal abnormality

An abnormal number of chromosomes will change the genetic makeup of the baby, and many organ systems, including the bowel, can be affected. An example is Trisomy 21, also known as Down syndrome, where the baby has three (instead of two) copies of chromosome 21. There are often other ultrasound findings in addition to echogenic bowel when there is a chromosomal condition.

Fetal infection

Infections that can affect the baby's bowels include cytomegalovirus, toxoplasmosis, and parvovirus B19. Often these infections do not make adults very ill, but they can cause the baby's bowels to be inflamed and swollen. This can show up as bright areas on ultrasound. Bright spots can also be seen in other places in the baby's abdomen.

Fetal growth restriction

Sometimes a baby measures smaller than expected. When the cause of a small baby is abnormal blood flow in the placenta, blood flow to the baby's bowel can be affected. This may cause it to appear bright on ultrasound.

False positive results

Depending on the ultrasound machine and the sonographer (person performing the ultrasound), echogenic bowel can sometimes appear brighter than it really is.

Should I have more tests done?

You will be offered additional testing to help determine the reason for the echogenic bowel. The exact testing offered will be based on the presence or absence of other ultrasound findings, your medical and pregnancy history, and results from any earlier testing you may have had. You may also be offered consultation with a Genetic Counselor, a medical professional with special training in genetic conditions.

Tests that may be offered include:

- **A detailed ultrasound examination**: This is to carefully look at your baby for any other ultrasound findings or abnormalities. Ultrasound can identify many but not all abnormalities.
- **Amniocentesis**: This is a test that removes a small amount of fluid from around the baby by a thin needle. The fluid can be tested for chromosomal abnormalities as well as fetal infections. . Other genetic tests may be offered, such as Chromosomal Microarray (CMA, or "chip") which looks more closely at the genetic make-up of the fetus.
- **Cell-free fetal DNA:** This is a maternal blood test that uses your baby's cells that are in your bloodstream. It is a very good genetic screening test for certain conditions, such as Down syndrome, but it is not as accurate as an amniocentesis.
- **Maternal blood tests for infection** such as cytomegalovirus or toxoplasmosis: These tests may determine if you have had a recent or past infection, but they will not tell you if your baby has been infected. If your results show possible infection, additional testing may be recommended to confirm an infection in your baby.

- **Maternal blood test for cystic fibrosis:** Because cystic fibrosis is a genetic condition, you only need to be tested for it once. Your results will never change. It may have already been done as part of your normal pregnancy laboratory testing.

What if all my test results are normal?

If all your tests are normal, your baby will likely be healthy at birth. However, it is important to remember that not all problems can be detected during pregnancy. Therefore, while normal testing is reassuring, it cannot guarantee that your baby will be healthy. Often echogenic bowel goes away over time. Even if this happens, your doctor may recommend follow-up ultrasounds to look at your baby's growth pattern and to reassess the bowel.