Fetal Small Bowel Obstruction

Patient Information Series – What you should know, what you should ask.

What is a Fetal Small Bowel Obstruction?

Fetal bowel obstructions can occur in the small bowel or the large bowel (colon). The small bowel, or small intestine, consists of three parts: the duodenum, jejunum, and ileum, any of which can be affected by a blockage. Normal bowel movement is facilitated by the muscular wall contracting to propel fluid through the intestines. When there is a blockage or narrowing, the bowel's movements, known as peristalsis, become exaggerated as it tries to push fluid through the obstruction. These movements can be observed with ultrasound over several seconds. The bowel may also appear larger than expected in certain areas, and its diameter can change over time. There can be one or more blockages, but ultrasound is not particularly helpful in determining the location or number of blockages. Additional signs on ultrasound may suggest the obstruction's location, including polyhydramnios (extra amniotic fluid), an enlarged stomach, ascites (fluid in the fetal abdomen outside the bowel), and calcifications (calcium accumulation) in the fetal abdomen.

How does a Fetal Small Bowel Obstruction happen?

Fetal bowel obstructions are relatively rare, occurring in 1 of 300-5000 live births. The exact cause is not fully understood, but it is believed to be related to damage to the blood vessels supplying the bowel during the first 6-12 weeks of fetal life. Obstructions can result from volvulus (twisting of the bowel), malrotation (improper rotation of the bowel), or intussusception (a portion of the bowel moving inside another portion). Maternal medications, including some decongestants, as well as maternal use of nicotine, amphetamines, or cocaine, have been associated with bowel obstructions.

Should I have more tests done?

Many women will choose to have more tests done to know more about the condition of their baby. The tests available depend on where you live. Tests to ask about include a blood test or amniocentesis (where a thin needle is used to take some of the fluid from the womb) or blood sample to look for cystic fibrosis. Unless there are additional ultrasound findings, amniocentesis for chromosomes is typically not recommended but this can be performed in any pregnancy. Occasionally, severely increased amniotic fluid volume (polyhydramnios) occurs and patients request an amniocentesis to temporarily reduce the amount of amniotic fluid to make them more comfortable for a few days. There is currently no prenatal treatment for bowel obstruction in the fetus. Your doctor may wish you to be evaluated by a specialist in ultrasound for more information.

What are the things to watch for during the pregnancy?

Babies with bowel obstructions should have additional ultrasound examinations. These ultrasound examinations will focus mostly on the baby’s growth and amniotic fluid volume, since

the most common complications in babies with bowel obstructions are a small baby and extra amniotic fluid (polyhydramnios). Fortunately, this does not happen in every case.

Re-evaluation of the abdominal cavity for pseudocysts (collections of fluid from the bowel that have leaked out due to a rupture of the bowel), calcifications on the lining of the abdomen, and extra fluid outside the bowel (ascites) which could indicate rupture of the bowel, may be performed. The baby's anus and rectum may be evaluated to see if there is anal atresia (where babies have imperforate anus). Sometimes a baby with a bowel obstruction has an enlarged stomach.

What does it mean for my baby after it is born?

After the baby is born, he or she will be transferred to a neonatal intensive care unit, where additional studies will be performed. A nasogastric tube will be placed to drain the secretions from the mouth and stomach and an IV will be placed. The baby will have X-rays taken to further evaluate the abdomen and a surgeon will be consulted. The baby will not be fed until the studies are completed. If surgery is indicated, the neonatal intensive care team will decide how best to provide nutrition for the baby and when feeding by mouth can begin. Additional testing may be done if cystic fibrosis is suspected.

When the baby is stable, a surgeon will remove the portions of the bowel which are not functioning well and will attempt to reconnect the portions of bowel which are not connected. The surgeon will determine how many blockages there are and how best to fix them. Most babies can have their bowel connected in one surgery, but, occasionally, the baby will need a colostomy (bag to collect intestinal fluids) until the intestine can be fully connected. The baby will be discharged once there are no issues with the bowel function and feeding. Some children may stay in the hospital for several months, but others are discharged after several weeks stay.

In the long term, the outcome for most children is excellent. There are some children who have long-term issues which are related to the amount of bowel that needs to be removed and additional bowel malformations. These problems can include short gut syndrome (poor absorption of nutrients due to lack of functional small intestine), bowel movement problems and recurrent blockages. Unfortunately, prenatal ultrasound is not able to predict which children will have these problems.

Will it happen again?

Most cases of small bowel blockage are sporadic, meaning that they are very unlikely to happen again. There are some rare families where there are recurrences of bowel obstruction. This is more of a concern if the baby is found to have the "apple-peel" or "Christmas tree" form of atresia, or if there are multiple blockages discovered at the time of surgery, or if the baby is diagnosed with cystic fibrosis. If any of these conditions are diagnosed, additional information will be available from your doctor, a genetic counsellor or a geneticist.

What other questions should I ask?

- Does this look like a typical small bowel obstruction?
- Do I have extra amniotic fluid?
- Do you see additional abnormalities in my baby?
- How often will I have ultrasound examinations done?
- What will you be looking for during these examinations?
- Where should I deliver?
- Where will the baby receive the best care after he or she is born?
- Can I meet in advance the team of doctors who will be looking after my baby when he or she is born, and tour the nursery?

Disclaimer:

The content of [this leaflet/ our website] is provided for general information only. It is not intended to amount to medical advice on which you should rely. You must obtain professional or specialised individual medical advice relating to your individual position before taking, or refraining from, any action on the basis of the content on [this leaflet/ our website]. Although we make reasonable efforts to update the information on [our leaflets/ website], we make no representations, warranties or guarantees, whether express or implied, that the content on [our leaflet/ website] is accurate, complete or up to date.

Last updated December 2024