

# Ultrasound-Guided Fetal Procedures: A Guide for Patients

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

## What are Ultrasound-Guided Fetal Procedures?

Ultrasound-guided fetal surgeries are a special kind of procedure or surgery where doctors use pictures from an ultrasound machine to help them do a procedure or surgery on a baby before it's born. This helps them be very careful and accurate while also keeping the baby and the mom safe.

## What are Different Types of Ultrasound-Guided Fetal Surgery?

Doctors use these surgeries to help babies with some problems inside the abdomen of pregnant person. The problems that can be addressed with ultrasound-guided surgeries include the following:

- **Fetal vesicoamniotic and thoracoamniotic shunts:** Sometimes babies develop too much fluid in certain parts of their body, like their bladder or their lungs. In some cases, doctors can use a small tube, called a shunt, to move this extra fluid from the bladder or the chest into the amniotic sac.
- **Selective fetal reduction:** Babies that share a placenta can sometimes create health risks for both the babies and the pregnant person. Doctors may recommend something called a selective fetal reduction, in which they carefully reduce the number of fetuses in the pregnancy. These are often very difficult, but can be life-saving for the rest of the pregnancy.
- **Vein of Galen embolization:** The vein of Galen is a big blood vessel in a baby's brain. Sometimes, it can be too big and can cause a problem if there is too much blood flow to the abnormal vessel. In some of these cases, doctors may recommend a fetal surgery to carefully decrease the amount of blood flow to the vein so that the rest of the baby can continue to develop normally and be healthier when it is born.
- **Prenatal treatment of placental chorioangioma:** The placenta can develop abnormal growths with lots of blood flow during pregnancy. This can be dangerous for the baby. Different types of ultrasound-guided procedures are used to lessen the blood flow to these abnormal areas of the placenta, while allowing the healthier areas to continue to grow.
- **Fetal cardiac intervention:** When certain types of heart defects are detected on ultrasound, doctors may recommend fetal surgery to help correct the problem before birth. Doing certain types of heart surgery on the baby in the second or third trimester can have a big impact on how healthy the baby is when it is born.
- **Intrauterine fetal transfusion:** Sometimes babies are diagnosed with anemia or low red blood cell count, which requires blood transfusion to them inside the womb. The details of this intervention are described in a separate patient information pamphlet.

## Common Steps in Ultrasound-Guided Fetal Surgeries

Before surgery, the doctor will explain everything and make sure you're comfortable. Sometimes they use medicine to make the area where they'll work numb, so it doesn't hurt (like at the dentist). Then, the doctor uses an ultrasound machine to see the baby and guide their hands during surgery. The surgery is usually done with a very thin needle and/or a few very small incisions on your abdomen. Some patients may receive antibiotics before surgery and/or a medication to prevent the uterus from contracting during or after the procedure. After the surgery, you and the baby will be looked after closely to make sure you're both doing well.

## Benefits of Ultrasound-Guided Fetal Surgery

Ultrasound-guided surgeries can help treat some babies before they are born. It's like helping early, so the baby can be healthier when it's born. Doctors can be extra careful during surgery because they see the baby in real-time pictures using the ultrasound. This helps them succeed in surgery and it also lowers the chance of complications. Babies born after this kind of surgery have better chances for a good life.

# Ultrasound-Guided Fetal Procedures: A Guide for Patients

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

## Possible Risks of Ultrasound-Guided Fetal Surgery

Even though this surgery is generally very safe, there are some things that can go wrong. Doing surgery during a pregnancy can result in early labor and an early delivery, which might be dangerous to the baby. There is also a small chance of an infection, which could make either the baby or the pregnant person sick. Doctors need to be really careful to minimize the impact on the baby during surgery. Sometimes the pregnant person can have bleeding, which might require more surgery. Most of the time, these procedures are considered 'minimally invasive' and safe, but complications can happen and your doctor will explain the specific risks to you prior to the procedure.

## Alternatives to Ultrasound-Guided Fetal Surgeries

Instead of surgery, doctors might watch the baby closely before it's born or do surgery after it's born. They can also give the pregnant person some medicine to help the baby. It depends on the particular condition and what is best for the baby and the pregnant person.

## What other questions should I ask?

- ✓ Why do you think my baby needs this surgery?
- ✓ What good things can happen because of the surgery?
- ✓ Are there other ways to help my baby without surgery?
- ✓ How many times has this type of surgery been done before?
- ✓ What will happen after the surgery to me and my baby?
- ✓ How long will it take for my baby to get better?

Your doctor will help you make the best choice for you and your baby. It's okay to ask questions to understand everything better.

*Last updated January 2024*