Gastroschisis: Antenatal Management and Early Repair

Information for Parents and Carers

What is Gastroschisis?

Gastroschisis is an abdominal wall problem, where there is a hole in the wall of their tummy. It occurs when a child's abdominal wall does not develop fully while in the womb.

In gastroschisis, the abdominal wall does not form completely so the bowels develop outside the abdomen and are visible when the child is born.

We are not certain what causes gastroschisis, although we do know that it is becoming more common, particularly in younger mothers. About 1 in 3000 babies is born with gastroschisis each year.

How is it diagnosed?

In most cases, gastroschisis is visible on antenatal ultrasound, and allows time for discussion and planning for when and where to give birth. Gastroschisis is not usually associated with other problems but the doctors will examine your baby closely to check if there are any other problems.

We monitor babies with gastroschisis with ultrasound scans during pregnancy to check growth and well-being. The growth of some babies slows during pregnancy and this is more noticeable after 38 weeks.

Many children with gastroschisis are born prematurely, often at around 35 weeks. Most are induced at around 37 to 38 weeks as there are increased risks after this time.

Generally children are born naturally (vaginal birth) but some may need a caesarean section for other obstetric (mother's health) reasons.

A few babies, who may not have had the gastroschisis diagnosed by antenatal scans, are diagnosed after they are born with bowel visible outside the abdomen.

Some areas of the bowel may look darker as they have been in contact with the amniotic fluid inside the womb which can cause thickening of the bowel

How is it treated?

Gastroschisis needs prompt treatment soon after birth, and will usually need surgical treatment within a few hours. Immediately after birth, doctors will examine and stabilise the baby and wrap the exposed intestines to reduce the amount of fluids and body heat lost, and protects the intestines. Your baby will be taken to the surgical unit, or one of our specialist neonatal wards.

There are 2 main options available to initially treat your baby. The first is to place the bowel in an initial silo (small plastic tube) and gradually reduce the bowel and delay closure of the defect (hole in abdomen) for a few days. Both the placement of the silo and closure of the hole may be done in our specialist neonatal unit or theatre.

The second option is to reduce all the bowel and close the defect immediately after birth. This is usually done in the operating theatre, if thought to be necessary.

The consultant in charge of your baby will inform you of which of these options seems best suited to your baby.

Are there any alternatives?

If your child is diagnosed with gastroschisis, surgical treatment is the only option. The defect will not get better without surgery, and the bowel will be injured because it is exposed. As explained above there are options on how it will be treated but this depends on the specific findings of the medical team, based on your baby's needs.

What does the operation involve?

The surgeon will examine the exposed areas of intestine closely to see if any parts have been damaged. If there are any damaged areas, removal of part of the damaged intestine may need to be performed. As much healthy intestine as possible is kept, while removing any damaged areas that could cause problems in the future. The surgeon will decide whether to return all of the bowel into the abdomen or whether to use the silo to do it more gradually.

The hole will eventually be closed with a combination of stitches and a dressing, or if appropriate, with a paper tape, called a Steristrip. This method is called a sutureless closure.

When can my child feed?

It can take a while for the intestine to start working. In the meanwhile your baby may need to be fed by a special drip using a substance called total parenteral nutrition (TPN). This is decreased as feeds are increased. On average it takes 6 weeks for babies with gastroschisis to get onto full feed, however it can be shorter, or if there are complications it can take longer.

Are there any risks or complications?

As with all medical conditions, there are some risks from having this condition and having treatment.

The outlook for children with gastroschisis is good, with the majority growing up to live normal lives. Most babies with simple gastroschisis, where no damage occurred to the intestines stay in hospital for about 4 to 6 weeks.

There is a very small chance that despite treatment the intestines may not work properly. This is requires long term TPN which can occasionally cause liver problems.

Anaesthetic complications: Every anaesthetic carries a risk of complications, but this is very small. Your child's anaesthetist is an experienced doctor who is trained to deal with complications. The Royal College of Anaesthesia states that throughout the lifetime of an individual they are 100 times more likely to suffer serious injury or death from a traffic accident than from an anaesthetic. Wherever possible we try to do procedures without a general anaesthetic, but with good pain relief.

You will have the opportunity to speak to an anaesthetist.

Atresia: This is when there is a gap in the bowel causing a blockage, and occasionally occurs in gastroschisis. This will need an operation to fix, and eventually join the two ends together. There is a chance that the area where the two ends of bowel were joined could start to leak, allowing intestinal contents to escape into the abdomen, or it may become blocked. A second operation may be needed.

Bleeding: This is usually minor and is stopped during the operation. Very occasionally patients develop severe bleeding, which may require a blood transfusion.

Injury to structures: Damage to structure in the abdomen (for example: intestines, liver, bladder) are rare. Your surgeon is trained in dealing with complications.

Abdominal compartment syndrome: This occurs if there is an excessively tight abdominal wall closure, leading to increased pressure in the abdomen. If monitoring of your baby indicates this is a possibility, the baby may need to be taken to theatre and have the abdominal wall opened and a temporary dressing or partial closure performed.

Infection: All surgery has a risk of infection. An infection in the wound can be treated with antibiotics. The lines used for the drip may become infected and need antibiotic or removal.

Scarring: There is usually a visible scar at the site of the defect. This is small and usually heals well, to look like an umbilicus (navel or bellybutton). Rarely, the scar can overgrow and need further attention.

Umbilical hernia: A hernia is possible where the hole in the muscle occurred originally. It can close by itself over the first few years of life. If it persists your child may need further surgery to fix it.

Short bowel syndrome

This is the term used when there is not enough intestines to absorb the nutrients needed for good growth and development. Children with short bowel syndrome may need their feeds topped up or replaced with TPN either on a short term basis while their intestine recovers, or for a longer period of time. There is a very small chance that despite treatment the intestines may not work properly, and can occasionally cause liver problems.

Further Information

This information was produced using the latest evidence available.

Further details are available upon request.

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