



Indian Association of Pediatric Surgeons

Patient Information Sheet

GASTROSCHISIS



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What is gastroschisis ?

Gastroschisis is a birth-defect in the abdominal wall from which the contents of abdomen, mainly intestines, protrude outside the baby's body. There is no covering over the protruded abdominal contents.

What causes this problem and how common is it ?

The improper development of baby's abdominal wall, which leads to formation of a hole on abdominal wall causes gastroschisis. This condition is not hereditary; i.e not seen to run in families. This condition is seen in about one in 2,000 newborns. Some of the risk factors described for this condition are younger age of mother, poor nutritional status of mother, alcohol or tobacco usage by mother etc.

What are the symptoms ?

The baby is born with an opening on the abdominal wall beside the belly button, from which contents of the abdomen hang outside the baby's body exposed to the environment. Immediately at birth, the exposed bowel is pink and moist, but within one hour, the bowel may become swollen and pale. At birth child may be active, but due to exposed bowel, he/she may become severely dehydrated and cold.

When to see your doctor ?

When a pregnant women is informed about the gastroschisis in developing fetus, she should consult the pediatric surgery team for proper evaluation and planning of delivery and possible plan of action. The baby should be delivered at higher centres with a qualified team of obstetricians, neonatologists and pediatric surgeons. Immediately at birth, newborn should be attended by the neonatologist and pediatric surgery team. The baby needs neonatal intensive care and management at well-equipped centre. If there is any delay transporting the baby to proper

healthcare settings, then the bowel should be covered with clean (preferably sterile) plastic sheet and baby should be wrapped in warm clothing. Do not wrap cloth or cotton around exposed bowel.

How is it diagnosed ?

Gastroschisis can be identified during antenatal ultrasound done after 18 week of pregnancy. An experienced radiologist picks up this condition early. However, whenever this condition is missed during ultrasound scans, then it is noted immediately at the birth of the child.

What are the treatments available ?

Surgery immediately after the birth is the only treatment for gastroschisis.

Are there any alternatives to surgery?

There are no alternatives to surgery.

What does the operation involve ?

- 1) The surgery is done with intention to place the bowel back into the abdominal cavity and close the abdominal wall.
- 2) However, if bowel is too swollen to be repositioned back in abdominal cavity or abdominal wall is not closing, then the bowel is covered with the impermeable cover (called as Silo) in a tent-like fashion and then attempted for gradually reposition bowel in abdominal cavity over the subsequent days. Once the bowel goes into abdominal cavity, then child is taken to operation theatre and abdominal wall is closed.
- 3) If abdominal wall will close very tightly, then partial closure is attempted, where the skin is closed and muscles are not closed (called as ventral hernia). When the child grows beyond one year, then proper closure can be planned.
- 4) At times when the bowel is damaged, then attempts for

segmental bowel repair or bowel resection (removal of damaged portion of bowel) is done. When it is difficult to close the ends of bowel into continuous tube like structure, then an exterior opening of bowel on abdominal wall is created (called as stoma) which allows passage of stool out of body.

What are the possible complications / what happens after the operation?

Unlike other congenital conditions, gastroschisis is less likely to have other systems defects. The main concern is the condition of bowel. The bowel that is exposed outside the body can be damaged due to poor handling of bowel after birth. Due to exposed bowel, these children are prone to get infection, dehydration and hypothermia. These can be fatal.

The operated babies with gastroschisis usually require ventilator support and ICU care in early post-operative. These babies often require prolonged hospital stay up to more than 30 days for close monitoring of general status, infections, feeding, bowel habits and overall development. They receive intravenous medications and nutrition till they get normal bowel functions; breast milk or formula feed is started then. Children with poor bowel functioning or short length of functioning bowel (short-bowel syndrome) may require prolonged IV nutrition and in severe cases, intestinal transplantation is recommended.

What is the outlook or future of these children ?

The exposed bowel may have altered functioning and needs time for adjusting. These babies are usually smaller than the average of same age and usually have delayed growth. When their issues with feeding and bowel habits settles with time, most of them are expected to live a normal life. Those with multiple surgeries and short bowel syndrome, can have persistent issues with feeding and bowel habits.