Neonatal Bowel Obstruction

Capital & Coast District Health Board
ŪPOKO KI TE URU HAUORA

Parent/Caregiver Information

Neonatal Intensive Care Unit (NICU)

What is a bowel obstruction?

Bowel obstructions are part or complete blockage of the small or large intestine. A blockage stops the contents of the intestine passing through the bowel normally.

99% of healthy full term babies pass their first stool (called meconium) within 24 hours of birth.

With preterm babies this length of time can extend up to 9 days. Preterm babies have a degree of gut dysfunction that can mimic an obstruction.

Signs and symptoms of a bowel obstruction

- Vomiting with or without green, yellow or orange staining
- Large volumes of milk left in baby's tummy long after their last feed
- Failure to pass meconium in the first 48 hours of life
- Round, extended looking tummy (abdominal distension)
- Tummy tenderness (most babies drawing up their knees do not have abdominal pain)

What are the causes of bowel obstruction?

- **Meconium plug syndrome:** hard dry meconium stops the passage of the bowel movement
- **Meconium ileus:** the meconium is abnormally thick, stringy and hard to pass
- **Volvulus / malrotation:** The bowel twists on itself stopping the passage of bowel movement
- **Hernia**: when a small piece of bowel or intestine pushes through a weakness in the muscles of the abdominal wall
- **Congenital adhesions**: bands of fibrous tissue that can bind the loops of intestine to each other or to other organs, narrowing the space between intestinal walls
- **Hirschsprung's disease**: when cells that co-ordinate bowel movement do not develop, the bowel is unable to move stools through as normal (also called reduced peristalsis)
- **Duodenal / jejunoileal atresia**: A blockage of the upper gastrointestinal tract that occurs during embryonic development, at about 5 weeks gestation
- **Other causes**:
    - some medications taken during pregnancy
    - electrolyte abnormalities
    - infection
    - hypothyroidism

What investigations will my baby need?

Your baby may require X-rays of the abdomen then further contrast studies (putting dye that shows on x-ray into baby via the stomach or rectally using an enema) and ultrasound examinations. These are used to help find exactly where the obstruction is occurring.

In some situations a rectal biopsy (tissue taken from the rectum) may be needed to find out what is causing the obstruction.

Treatment of bowel obstruction

Your baby will be placed in a closed incubator. They will be kept naked, with full monitoring so close observation can be done without disturbing them.

As your baby will not be able to feed until a diagnosis is made they will be given intravenous fluid with additives to keep them hydrated. You will need to keep expressing breast milk to maintain your supply.

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A gastric tube will be passed through your baby's nose or mouth into their stomach and put on suction. This allows the stomach contents to be examined and measured. The amount of fluid that is removed will be returned using intravenous fluids to avoid baby becoming dehydrated.

Baby may also need help with breathing. This is because sometimes the tummy can become so large it interferes with the lungs expanding during normal breathing. If this occurs your baby will have extra oxygen supplied either through their nose with nasal prongs or straight to their lungs with a breathing tube in their mouth.

Blood samples will be taken and sent to the lab to rule out infection as a reason for the expanded tummy or obstruction. Often antibiotics will be started, just in case. The antibiotics will be stopped if the blood results are negative.

Surgery

If surgery is needed a meeting will be arranged with you and the surgeon to explain treatment options, arrange surgery time and to obtain your consent for baby's surgery.

An anaesthetist will also meet with you to explain their role and obtain consent from you for baby's anaesthetic.

After surgery

Your baby will be sedated (in a drug induced sleep) and have a breathing tube to help with their breathing. Regular pain relief will be given to make sure baby is comfortable.

Over a course of days (or sometimes hours) your baby will slowly wake up and breathe on their own. After this time baby will be able to get up for cuddles.

Feeding baby will not start until the surgeon is satisfied that baby's bowel is working normally. Once feeding does start this is with very small amounts of milk from a bottle or through the tube in their tummy. Once baby has shown they are able to feed without any problems it is possible to feed directly from the breast.

Sometimes it may take longer than 10 days for baby's bowel to start to function normally. If this occurs a central line (intravenous line to a big vein) will be used to give fluids and nutrients until baby's bowel is functioning.

What happens if my baby does not have surgery?

All bowel obstructions are potentially serious. Some can be managed without surgery. However if surgery is required, the operation will be performed as soon as possible, at any time of the day or night. This is because without blood supply the bowel can die.