Example of Fully Adopted Network Guideline with local information added

GASTROSCHISIS

DEFINITION

Congenital defect of the anterior abdominal wall, resulting in herniation of the abdominal contents. The herniated viscera are not covered by any surrounding membranes and are exposed to amniotic fluid during pregnancy and air following delivery

DIAGNOSIS

- Majority of cases diagnosed on antenatal ultrasound scan
- Refer mothers carrying a baby with suspected gastroschisis to a fetal medicine department for further assessment
- Paediatric surgeon will discuss antenatal care with parents

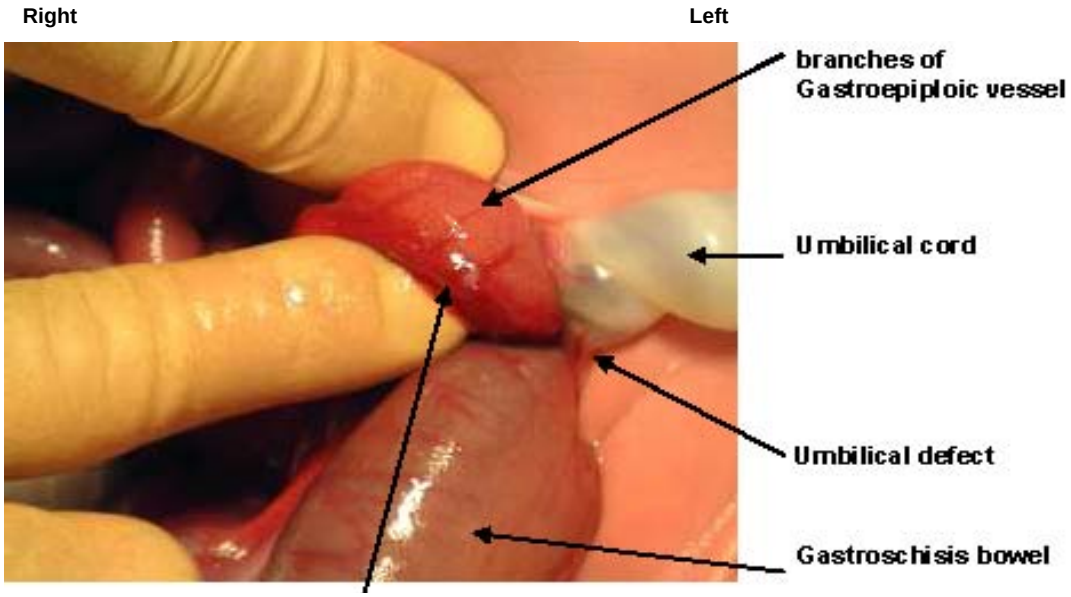
PRE-DELIVERY

- Babies with a gastroschisis will usually be induced in a tertiary surgical centre (provided a neonatal surgical cot is available)
- If an unplanned delivery is imminent in another hospital, neonatal SpR or consultant will discuss with on-call paediatric surgical consultant or SpR at planned place of surgery (usually Alder Hey Children's Hospital, Liverpool for UHNS)
- If no surgical cot is available there and delivery cannot be postponed, speak to surgical team at one of the surrounding units e.g. Leicester, Birmingham, Nottingham and Liverpool
- Once baby is induced or mother in labour, inform transport team

DELIVERY

- Neonatal SpR and SHO or ANNP attend delivery
- Take a gastroschisis bag (large sterile bag which can be closed around baby's chest with a draw-string), or transparent cling film and a size 8 FR nasogastric (NG) tube
- Babies become cold very quickly and experience fluid loss from the exposed bowel. Perform the following, as rapidly a possible:
- person delivering baby to place a plastic cord clamp (not artery forceps), on umbilical cord approximately 5 cm from baby's abdomen, checking cord clamp securely fastened. If in doubt, apply a second plastic cord clamp adjacent to the first
- dry upper part of baby quickly
- initiate ABC resuscitation as required but avoid prolonged mask ventilation. If prolonged resuscitation necessary, intubate
- pass a size 8 FR NG tube and fix securely with tape
- empty baby's stomach by aspirating NG tube with a 10 or 20 mL syringe. If <20 mL of fluid aspirated, check position of tube
- place tube on free drainage by connecting to a bile bag
- If stomach protruding through defect (Image 1), ensure it is decompressed

Image 1



Gastroepiploic vessel is a longitudinal vessel running along the greater curvature of the stomach and helps identify the stomach from the bowel

Image 1

- If stomach cannot be decompressed, call surgical registrar for further advice. Failure to decompress the stomach can cause pressure on the bowel mesentery resulting in bowel ischaemia
- Assess colour and alignment of bowel
- Put on two pairs of sterile gloves and carefully handle the bowel to ensure it is not twisted or kinked and there is no traction on the mesentery (Image 2)

Image 2

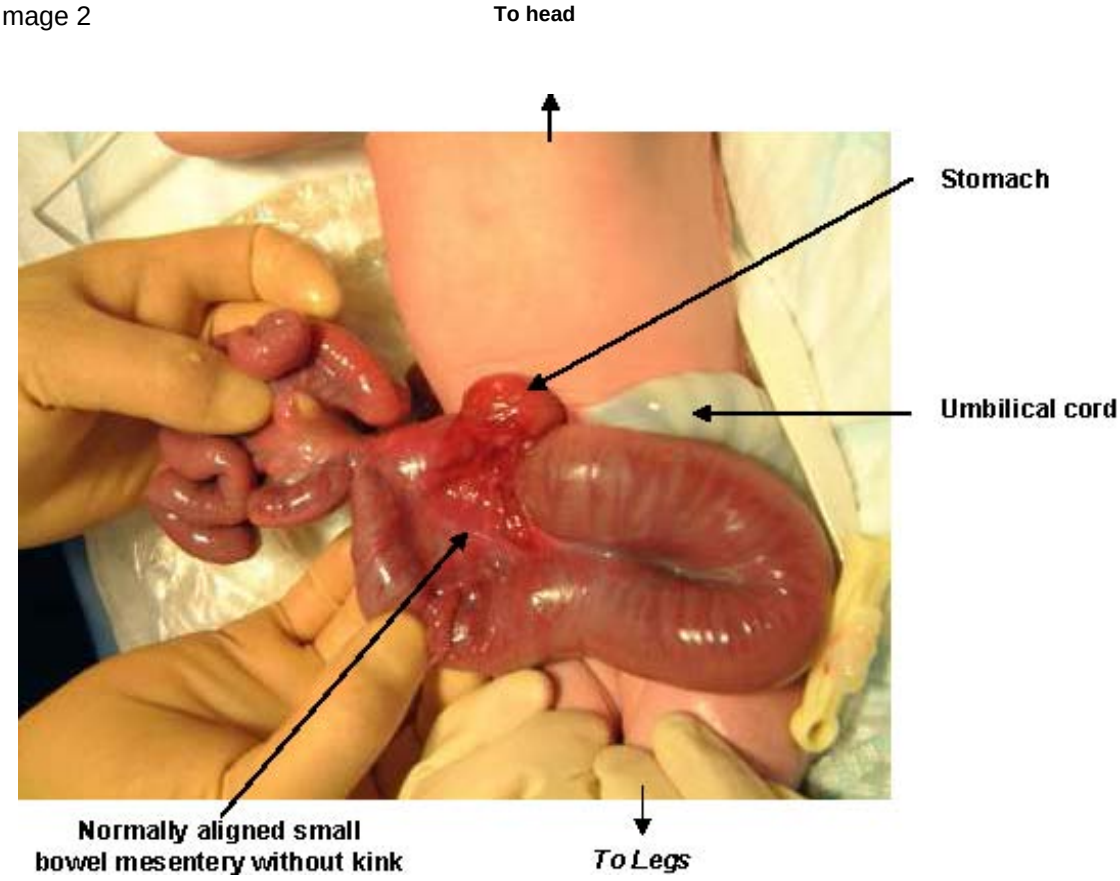


Image 2

- Place baby onto the side corresponding to the side of the defect (usually right), place a folded nappy just slightly under baby and rest bowel onto this to support it
- Check perfusion of bowel. If vascular compromise suspected, call consultant neonatologist
- if vascular compromise persists, inform on-call surgical team at planned place of surgery immediately
- Place baby's legs and trunk into gastroschisis bag, feet first, and pull draw-string under baby's arms so both arms are outside top of bag
- Alternatively, cover and support intestines with cling film from upper chest to lower abdomen, holding intestines in central position
- ensure intestines are visible
- do not wrap cling film tightly as this will reduce perfusion
- Show baby to parents and transfer to Neonatal Unit (NNU)
- Check perfusion of bowel again immediately before transfer to NNU and at least every 15 min thereafter

IN NNU

- Inform transport team that baby is born and will need transfer within 2 hr
- Monitor perfusion and alignment of bowel at least every 15 min
- Aspirate NG tube again and record volume
- Insert an IV cannula, Avoid potential long line veins as baby will require many weeks of parenteral nutrition
- Avoid umbilical lines
- Infuse 20 mL/kg sodium chloride 0.9% over 1 hr and start routine IV maintenance fluids – see IV fluid therapy guideline
- Start antibiotics:
- cefuroxime 25 mg/kg IV 12-hrly
- metronidazole: loading dose 15 mg/kg IV over 10 min, then 7.5 mg/kg IV 12-hrly
- Give Vitamin K IM into deltoid muscle according to local policy or Neonatal Formulary
- Inform staff at the Surgical Unit, that baby is ready for transfer. Have available:
- name
- gestational age
- weight
- ventilatory and oxygen requirements
- mother's name and ward (if mother admitted)

Blood samples

Baby

- Blood culture
- FBC and clotting studies, including fibrinogen
- U&E
- Blood glucose
- Capillary blood gas
- Check with planned place of surgery if a sample from baby for Group & Save, Coombs' or cross-match is required

Mother

- Obtain sample of mother's blood for cross-match
- handwrite form, completing all relevant sections fully. Indicate this is the mother of baby being transferred and include baby's name. This information will be required by Surgical Unit blood bank

AWAITING TRANSFER TO SURGICAL UNIT

- Continue to assess bowel perfusion and alignment every 15 min
- Reassess baby's fluid requirements hourly. If fluid boluses required, give 10 mL/kg sodium chloride 0.9%

- If evidence of a coagulopathy, treat with fresh frozen plasma (FFP) or cryoprecipitate, as appropriate – see Coagulopathy guideline
- Aspirate NG tube hourly and replace aspirate volume, mL-for-mL with IV sodium chloride 0.9% with 10 mmol potassium chloride in each 500 mL bag
- Leave the NG tube on free drainage

DOCUMENTATION

- Take photographs for parents
- Complete nursing and medical documentation for transfer and obtain copies of X-rays if taken
- Ensure details of mother's name and ward (including direct dial telephone number) are included
- If mother discharged, obtain contact telephone number (including mobile). If operation necessary and a parent unable to attend Surgical Unit, surgeon will require verbal telephone consent

TRANSFER TO SURGICAL UNIT

- Inform Surgical Unit that transfer is underway
- Place baby in transport incubator, taking care to transfer bowel and mesentery in a supported, non-kinked position. Keep stomach empty
- place baby on its right side and support bowel on a folded nappy just slightly under baby. Check bowel perfusion immediately and at least every 15 min
- Ensure mother's blood, letters for surgical team and all documentation accompanies baby
- Ensure baby's documentation includes:
- whether Vitamin K has been given
- name of referring consultant
- whether parents received antenatal counselling
- mother's name, ward (if admitted) and her contact details
- If parents have not yet seen baby, take the infant to them, in the transport incubator, en-route to ambulance

During transport

- Carry out and document usual observations, include bowel perfusion and alter its position if necessary

Arrival at Surgical Unit

- Record bowel perfusion and alignment