**1.0 Introduction**

This guideline is designed to guide the management of cysts that are…

- Detected in the antenatal or neonatal period by ultrasound.
- Solely within the abdomen or pelvis.
- Neither within, nor felt to be arising from an intra-abdominal solid organ or the urinary tract.

**2.0 Background**

The antenatal detection of intra-abdominal cysts is increasing. Current reports suggest they are detected in approximately 1:2000 pregnancies. However when a specific antenatal diagnosis is suggested around 20% will have this amended following a postnatal scan.

The natural history of antenatally detected intra-abdominal cysts is that many will spontaneously involute or regress.

- Up to 25% of antenatal detected cysts have resolved by a postnatal scan at one week of age.\(^1\)
- Up to 75% of simple ovarian cysts <5cm size will spontaneously resolve.\(^3\)

Antenatally detected intra-abdominal cysts include:

- Ovarian
- Intestinal duplication
- Mesenteric
- Vitello-intestinal

Nearly all cysts will be asymptomatic; however possible symptoms include:

- Abdominal pain.
- Vomiting.
- Abdominal distension.
- Respiratory compromise.
- Rectal bleeding.

These symptoms may be due to:

- Ovarian torsion.
- Bowel obstruction, including volvulus.
- Mass effect.

Meconium psuedocysts may also be detected on an antenatal ultrasound. They will nearly always cause vomiting and abdominal distension, due to obstruction. These may be associated with an underlying diagnosis of Cystic Fibrosis.
3.0 Management
3.1 Antenatal
The finding of an intra-abdominal cyst should prompt Referral / Discussion with a Fetal Medicine unit, consideration should be made as to the appropriate place for delivery. A copy of the fetal ultrasound report should be sent to the Neonatal Surgical Ward at Birmingham Children’s Hospital for information purposes. Parents expecting a baby with this condition will not routinely be seen by a Surgeon for antenatal counselling, however this can be arranged at Fetal Medicine or Parental request.

3.2 Delivery
In the majority of cases obstetric management would not alter due to the presence of an intra-abdominal cyst.

3.3 Post-natal
Babies should be resuscitated in the usual way if that is needed at birth. Once stable, a full postnatal physical examination of the newborn should be performed.

If a Meconium Pseudo cyst is suspected antenatally, the baby should not be fed. A size 8 Fr nasogastric tube should be passed immediately after birth and fixed securely with tape. The stomach should be emptied by aspirating the nasogastric tube with a 10 or 20 ml syringe. If less than 20ml of fluid is aspirated from the nasogastric tube, consider whether the position of tube is correct. Once stabilised, admit the baby to NNU. Place the NG tube on free drainage by connecting it to a bile bag and start intravenous fluids. These babies should be referred on the day of birth to the on-call surgical team at Birmingham Children’s Hospital (BCH). Call the KIDS (Intensive Care and Decision Support) referral line on 0300 200 1100 and they will lead you through the referral process.

Otherwise, unless significant abdominal distension is present following birth, the baby should be allowed to feed normally and observed in the post-natal ward for at least 48 hours. If the baby remains well after 48 hours with no abdominal symptoms they can be discharged home. All infants must have an abdominal ultrasound scan arranged. This can be performed as an outpatient but must be within a week of birth.

3.4 Timing of surgical referral :
The urgency of referral depends upon the situation….

- **Meconium Pseudocyst** :
The baby should managed as above and be referred to the surgeons on the day of birth.

- **Symptomatic Cyst** :
Any baby, known to have a cyst, which is causing symptoms (see list above) should be stabilised on NNU and referred to the on-call surgical team at BCH on the day that symptoms are recognized (use the KIDS referral line 0300 2001100)

- **Asymptomatic Cyst** :
An abdominal ultrasound must be performed within a week of birth. Once the result is known, a written referral should be made to a Consultant Paediatric Surgeon at Birmingham Children’s Hospital for a surgical outpatient appointment. The ultrasound is to provide both additional information and to exclude other potential diagnoses, which may require alternative management.

- **Resolved Cyst** :
A postnatal ultrasound should be performed within one week of birth, even if it seems to have resolved during the pregnancy. Medical staff should decide whether an outpatient surgical referral is required.
4.0 Surgical Management
The baby will be clinically assessed, this may include further imaging. Ultrasonography may not always reliably differentiate between the different types of intra-abdominal cysts, so a contrast study, MRI or CT scan may sometimes also be required.

If there is an expectation that a cyst is likely to spontaneously resolve it may be monitored with serial ultrasound scans. Most ovarian cysts, simple or complicated, tend to spontaneously regress after birth. Complicated ovarian cysts (those containing septations, a fluid level or a solid component) generally take longer to disappear.

Possible therapeutic interventions include aspiration of the cyst (under ultrasound guidance) or surgery. An operation is occasionally performed to fully identify and excise the cyst. Removal of the cyst may need to include an oopherectomy, for ovarian cysts, or a limited bowel resection, for cysts related to the intestine. This surgery may be performed by either an open or laparoscopic technique.

5.0 Useful Information – click for internet links

- Information about the Neonatal Surgical Unit at Birmingham Children’s Hospital
- How to get to Birmingham Children’s Hospital

6.0 References


