Anorectal Malformations (ARM)

- 55% of infants pass meconium by 12 hours of age
  - 76% by 24 hours
  - 97% by 48 hours
- Infants born by C.S have a slightly delayed passage of meconium 71% by 24 hours.
- 81% of preterm infants pass meconium by 24 hrs.
- Routine newborn examination must include a thorough perineal examination.
- The examiner must confirm a normal, correctly positioned anus.
- Posterior Sagittal Anorectoplasty (PSARP) is the surgery of choice.
- Delayed diagnosis increases the need for emergency surgery and an initial colostomy.

Ano-Rectal Malformations such as anal atresia are easy to miss at the routine newborn examination. Misdiagnosis is more common in females because of recto-vaginal fistulas. At least 20% of cases remain undiagnosed at the time of discharge from the nursery. The potential to miss cases has increased since the discontinuation of routine rectal temperature readings.

The infant is asymptomatic at birth. Timely diagnosis depends on good newborn screening examination by nursing and medical staff & routine documentation of the passage of a normal stool. Any infant who has not passed meconium by 24-36 Hrs should be promptly evaluated by senior staff. It is urgent.

The correct examination consists of flexing the legs, gently separating the buttocks and identifying that the anal ring is completely intact. If in doubt pass a nasogastric tube covered in KY Gel through the anus.

It is important to ensure that every newborn infant has passed a normal meconium stool. Green staining of the napkin is not sufficient as this frequently occurs in cases of anal atresia with a fistula. Failure to appreciate this important point is a common cause of misdiagnosis.

If undiagnosed the infant will develop increasing bowel dilatation secondary to the obstruction. Bowel perforation will occur on day 4 or 5, most commonly the small intestine.

Treat the infant as a case of intestinal obstruction. Stop oral feeds, pass a nasogastric tube, commence IV fluids. Refer to paediatric surgeons.

Contact the Paediatric Surgery centre and arrange transfer for further management.

The incidence of ARMs is 1:2500 live births. Additional anomalies are found in 71% infants with an ARM. The most common organ system involved is the genitourinary system.

ARM is associated with the VATER and VACTERL complexes.

ARMs are classified into clinical groups depending on the fistula location such as perineal, recto-urethral, recto-vesical, vestibular & those with no fistula and anal stenosis.

In Ireland there has been 91 cases of imperforate anus between 1999-2009. There were 21 late diagnoses. This indicates that one in five cases is being missed.

Delayed diagnosis results in significant and life threatening morbidity.
References:

2. Tariq M, Barron M, Ryan CA. Early postnatal discharge and time to pass meconium in the newborn. IrMed J 2012;105:

This care pathway has been produced by the National Paediatric and Neonatology Clinical Programme. It is aimed at medical, nursing and allied health professionals working in Irish neonatal units.