Mortality Review Group (MRG)
Learning Points – 25 June 2019

Resuscitation

1. When ventilating with a mask, chest wall movement is difficult to determine and all team members should be involved in whether initial resuscitation steps are being effective.
2. If a baby is failing to respond to resuscitation when all measures have been tried and verified as complete, needle thoracocentesis using a butterfly or open needle system should be tried.
3. Cold light illumination is not effective in large term babies and a negative could be false. Positive responses are likely to be correct. Transillumination from a mid-axillary position in small babies may help differentiate between unilateral transillumination
4. Some case reports suggest that attempts to resuscitate should be continued for up to 20 minutes of **effective** resuscitation as there are published cases of good outcomes up to this time.
5. Staff who have not under gone NLS training should receive additional support for attending resuscitations
6. During resuscitation with a clear pulmonary haemorrhage, ETT should not be removed if at all possible. ETCO2 will not register. Higher pressures should be used and correct placement of the tube may be confirmed by direct or video inspection.
7. Detailed documentation is essential around time of resuscitation / stabilisation in order to determine perinatal events and facilitate bereavement counselling. Doctors involved in resuscitation should ensure all notes are accurate and detailed in the immediate period after resuscitation has taken place.
8. Sodium bicarbonate can be given peripherally with care if a central access is not possible. Prescribing and administering information is available through YNN website.

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Equipment

1. Size 3.5 UAC catheter does not pass well down umbilical vein so size 5F and 8F should be available in resus equipment.
2. Size 2.0 ETT are difficult to secure within the neofit and additional taping is advised around the ETT before the neofit strap is tightened.
3. Draeger Vn500 cannot deliver < 2.5mls per breath on VG mode (2.5mls equates to 5mls/kg in a 500g baby). Where minimal ventilation is required in babies under 500g pressure controlled ventilation or lower rates may be required.
4. Neonatal units should consider taking responsibilities for a fully stocked resuscitation trolley on L&D
5. Humidity should be set at 80-85% as soon as possible and all aspects of thermoregulation should be considered carefully and in detail.

Establishing cause of Death

1. Post mortem should be offered to all irrespective of religion.
2. A limited post mortem has value where parents are unsure about full post mortem and can allow for later genetic and prenatal counselling.

Other Aspects of Treatment

1. Rapid exome sequencing should be considered for all babies in NICU with significant clinical conditions where array cgh is normal. Early involvement of geneticist will assist in access to this test.

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Communication/PMRT/Bereavement Follow Up

1. Counselling for known lethal genetic conditions should be led by or supervised very closely by a consultant neonatologist. A second opinion can be sought from another neonatal service where differences of opinion exist between the family and medical staff. Where possible a specific postnatal care plan should be agreed to cover all expected possible scenarios.

2. Joint bereavement meetings can have benefit to families but units involved should agree specifically who will be inviting parents for counselling. Parents should be involved in the decision as to which unit can offer the most beneficial counselling.

Other Aspects of Treatment

1. Where there are no other indications for immediate delivery, consider discussion about maternal treatment with flecainide prior to delivery to try and achieve sinus rhythm in utero
2. NEC still occurs even if maternal milk fed at all times and diagnosis should be actively sought if symptoms are suggestive of this.
3. There is a risk of overdose of Curosurf in very small babies as a 120mg vial can equate to >300mg/kg