SOUTHAMPTON OXFORD
NEONATAL TRANSPORT

THERAPEUTIC HYPOTHERMIA

Additional equipment:
- Cooling equipment and paperwork
- Rectal temperature probe
- Cerebral function monitor and leads

Consider carefully whether uplift for specialist intervention is in the best interest of the baby and family based on referral information.
Discuss with Supervising Consultant.

Initial assessment
- Detail exact timings of perinatal events, condition at birth, resuscitation and post-natal interventions. This may include circumstances pertaining to a post-natal collapse
- Clarify management to date and rationale for therapeutic decisions.
- Reaffirm eligibility criteria for therapeutic hypothermia, decision time and 'start of cooling' time. (A+B/C)
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A: Eligibility criteria after birth: ONE of
- Apgar less than or equal to 5 at 10 minutes
- Assisted respiratory support at 10 minutes
- Acidosis within 60 minutes (pH < 7.00)
- Base deficit ≥ 16 within 60 minutes

********Target temperature: 33.5°C *******

B: Eligibility criteria: ALL of B or ONE of C
- Altered state of consciousness
- Abnormal tone
- Abnormal reflexes (sucking, moro)

C: Seizures or abnormal cerebral function monitoring

Instigation of care
- Ensure priority is given to optimise respiratory and cardiovascular stability.

Respiratory support
- Determine appropriate respiratory support for transfer in consultation with Consultant.
- Check blood gases to maintain normocarbia. $PaCO_2$ 5-6 kPa (input body temp. in gas machine)
- Ensure adequate sedation

Cardiovascular
- Assess the need for central venous access and invasive BP monitoring
- Support blood pressure as required to maintain MBP ≥ 40 mmHg. Give fluid bolus if 10 mls / kg 0.9% saline if evidence of hypovolaemia. Dopamine 5-20 micrograms/kg/min (dobutamine if no central access). Discuss further inotropes choices with supervising consultant. Normalise acidosis with judicious use of alkalysing agents. Correct blood sugar, calcium and magnesium.
- If pulse rate is above 100 consider whether infant is either in pain or underfilled.

Haematology
- Treat platelet and coagulation abnormalities prior to transfer

Fluids
- 40 mls / kg / day 10% dextrose. Increase dextrose concentration rather than volume if hypoglycaemic.
- Monitor urine output

Neurological
- Document neurological status
- Treat fits: phenobarbitone 20 mg/kg over 20 mins. A further 10 mg/kg can be given 40-60 mins later If further anti-convulsant treatment is required discuss with Supervising Consultant
- Instigate cooling. Record temperature every 15 minutes and time to reach target temp.

Presumed sepsis
- Consider need to treat with antibiotics if sepsis suspected – Cefotaxime and amoxicillin. Avoid Gentamicin

Passive cooling (use active cooling wherever possible)
- Undress baby and remove hat. Turn incubator down to 25 °C and consider opening portholes.
- Monitor rectal temperature and record every 15 minutes. Ensure temp does not fall below 33°C.
- Consider nesting baby surrounded by gloves filled with tap water. Do not use ice or fans.