Standard in brief

Medical care & clinical practice

Postnatal management of newborn infants with hypoxic ischaemic encephalopathy (HIE)

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Statement of the standard

Newborn infants who have suffered from **hypoxia-ischaemia receive early evaluation and appropriate postnatal management** and monitoring including therapeutic hypothermia in infants with 'moderate to severe' encephalopathy and follow-up.

For parents and family

- Parents are informed by healthcare professionals about the management and outcome of hypoxic ischaemic encephalopathy (HIE).
- Parents receive counselling regarding the expected short- and long-term outcome and prognosis related to HIE prior to discharge by healthcare professionals.

For neonatal unit

- A unit guideline on the management of HIE, including monitoring of blood glucose, a-EEG, seizures, heart rate, oxygen saturation, PCO_2, and blood pressure, is available and regularly updated. Other predictive markers of insult severity and outcome are LDH, the time it takes for lactate levels to drop to <5 mmol/L, and low or high glucose. Important markers available in many units are the time it takes for a-EEG to normalize after birth and MRI severity scoring.
- Infants who require hypothermia treatment are managed in centres with documented expertise and experience including in temperature-monitored transfer and passive or active cooling.

For hospital

- Training in assessment and management of encephalopathic infants is ensured.
- At designated units, cooling devices and monitoring equipment are available.

Benefits

Short-term benefits:

- Reduced excitatory neurotransmitters, reactive oxygen species, neuroinflammation and reduced delay of secondary and tertiary energy failure
- Selection for treatment improves the standard of clinical care using careful grading of hypoxic ischaemic encephalopathy (HIE) severity, neurophysiological monitoring and documentation of standard organ specific biochemical markers
- Reduction in encephalopathy by early initiation of TH and earlier treatment of seizures
- Documentation of neurological status at discharge for comparison of 2 year follow-up

Long-term benefits:

- Improved motor and cognitive outcome at 2 years of age, at 5 years reduced health and societal costs, reduced occurrence of epilepsy at 2 years and less severe cerebral palsy in survivors

For healthcare professionals

- A unit guideline on management of HIE including criteria for hypothermia treatment is adhered to by all healthcare professionals.
- Training in assessment and management of encephalopathic infants is attended by all responsible healthcare professionals.
- Moderate hypothermia treatment is started within 6 hours and continued for 72 hours after birth of eligible infants.

For health service

- A national guideline on management of HIE including criteria for hypothermia treatment is available and regularly updated.
- Hypothermia treatment including documented follow-up at 2 years (as suggested in national guidelines preferably also later ≥ 5yrs) and necessary educational support is coordinated and organised.
- Support services for families of infants with HIE are available.

european standards of care for newborn health

Here you can access the full standard:
https://newborn-health-standards.org/standards/standards-english/medical-care-clinical-practice/postnatal-management-of-newborn-infants-with-hypoxic-ischaemic-encephalopathy-hie/

GFCNI global foundation for the care of newborn infants