GUIDELINE

Neuroimaging for the Preterm Infant

Scope (Staff):	Nursing and Medical Staff
Scope (Area):	NICU KEMH, NICU PCH, NETS WA

CAHS commits to being a child safe organisation by applying the National Principles for Child Safe Organisations.

Read the full statement here:
CAHS Child Safe Organisation Commitment Statement

This document should be read in conjunction with this disclaimer

Aim

Outline the criteria for neuroimaging for the preterm infant during inpatient stay and on discharge.

Risk

Without early identification of risk factors, opportunities for early intervention may be missed which may impact the infant's care plan or development.

Cranial Ultrasound

Indications

- Prematurity (routine screening) gestation <32 weeks
- Can be considered:
  - If gestation in preterm infants is unknown
  - in preterm infants >32 weeks if:
    - neurological abnormalities (e.g. seizures, hypotonia)
    - antenatal abnormalities (e.g. arachnoid cysts)
    - hypoxic ischaemic encephalophagy
    - other congenital abnormalities
    - congenital or acquired Central Nervous System (CNS) infections (e.g. calcification, ventriculitis, abscess)
    - coagulopathy or significant thrombocytopenia

Screening Frequency:

Timing of scan	<31+6 weeks	Hypoxic Ischaemic Encephalopathy/ abnormal neurological examination/ syndromes
Day 1-4	✓	✓
Day 7	✓	optional
Day 28	✓	optional

Further scans may be requested depending on findings or clinical deterioration e.g. Post Haemorrhagic Ventricular Dilatation (PHVD), Periventricular Leucomalacia (PVL), evolving Germinal matrix-intraventricular haemorrhage (GMH-IVH), persistent neurological examination abnormalities.

Magnetic Resonance Imaging (MRI) Brain

MRI should be performed, with parental consent, at term equivalent (>38 weeks) for all babies born at <28 weeks.

Discharge and Transfer Planning

- Ideally MRI scans should be performed as inpatients.
- Discuss with consultant whether to bring scan forward if discharge or transfer is approaching. If MRI performed, then review any scans prior to discharge or transfer.
- Many back-transfer hospitals can conduct head ultrasounds, please liaise with discharge coordinators to ensure this has been arranged.
- Arrange an outpatient appointment for Metropolitan and country infants, to coincide with follow-up and/or other appointments to obtain results of the MRI scan. Inform parents of all results/appointments.

Related CAHS internal policies, procedures and guidelines
• Discharge Process: Medical and Nursing Responsibility • MRI Guideline • Thrombocytopenia • Tiny Baby Protocol • Ventricular Dilatation

This document can be made available in alternative formats on request.

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