-nd/3.0/au/deed.en Queensland Clinical Guidelines, Guidelines@health.qld.gov.au

Neonatal seizures: Assessment and management

Baby with suspected seizure activity

Observe and monitor:

- Seizure activity
- Temperature, heart rate, respiratory rate & effort, BP, O₂ saturation

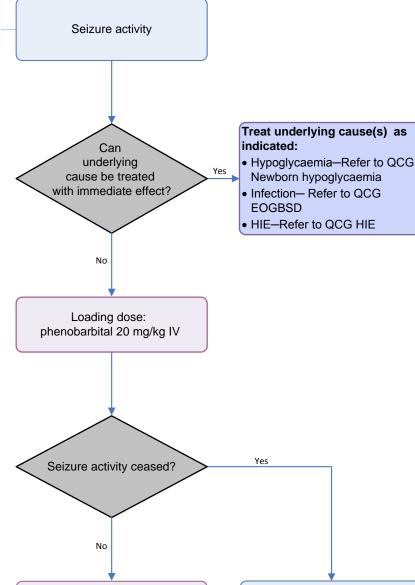
Treat cardiorespiratory compromise

Assessment:

- · Review history (maternal, perinatal, family)
- Physical examination
- Neurological examination
- Investigate for underlying cause as required
- o Refer to flowchart: Investigations

Management:

- Treat underlying cause
- o Refer to other QCG guidelines
- Commence AEDs if seizures:
- o Duration > 3 minutes
- o More than 2 brief episodes
- o Detected on EEG
- Initiate ongoing communication with parent(s)
- Obtain advice from neonatologist as required



Treatment:

- If seizures intractable within hours of birth & resistant to AEDs consider pyridoxine 50-100 mg IV
- Additional doses of phenobarbital:
- o 5-10 mg/kg IV (to total dose of 40 mg/kg)
- Second line drug:
 - o Phenytoin 15-20 mg/kg IV
 - o Midazolam 0.15 mg/kg IV
 - o Levetiracetam 10 mg/kg IV twice per day
 - Topiramate 5 mg/kg orally
 - o Clonazepam 100 micrograms/kg IV
- o Lignocaine 2 mg/kg IV and follow with IV infusion

Maintenance therapy:

• For difficult to control or prolonged seizures or abnormal EEG

Consider ceasing AEDs if:

- Seizures controlled and neurological examination normal OR
- Neurological examination abnormal but EEG normal

Queensland Clinical Guideline: Neonatal seizures Flowchart version: F17.23-1-V1-R22

Abbreviations: AED: Anti-epileptic drug(s); BP: Blood pressure; EEG: Electroencephalogram; EOGBSD: Early onset Group B Streptococcal disease; HIE: Hypoxic ischaemic encephalopathy; IV: Intravenous; QCG: Queensland Clinical Guidelines, >: Greater than

