ROPIVACAINE 0.1% EPIDURAL IN NCC

Alert	**Not for intravenous infusion under any circumstances** **Ensure naloxone is prescribed.**
Indication	Ropivacaine may be given as an epidural infusion for surgical anaesthesia and analgesia for postoperative pain in neonates > 37 weeks and > 2.5 kg.
Action	Ropivacaine is a long-acting local anaesthesia of the amide group. It reversibly blocks the conduction nerve impulses in the peripheral nervous system producing a loss of sensation in that area of the body with a varying degree of motor block. Ropivacaine given epidurally has a quick onset of action < 30 minutes. Absorption is biphasic, the initial rapid phase (half-life 14 minutes) and slower second phase (half-life 4 hours). Approximately 95% of the dose delivered is absorbed. The duration of sensory block is dose dependent. Given in higher doses, ropivacaine causes less CNS toxicity and cardiovascular toxicity than Bupivacaine.
Drug Type	Local anaesthetic
Presentation	Ropivacaine 0.1% (1mg/mL) in a 50 mL pre mixed bag.
Dosage/ Interval	Only medical officers of the Sydney Children's Hospital (SCH) Department of Anaesthesia and the Acute Pain Service (APS) may prescribe epidural infusions and boluses. The initial and overall responsibility of any given patient with an epidural infusion is the SCH Consultant Anaesthetist, and by delegation the on duty paediatric anaesthetic registrar. Epidural infusion must be prescribed by a paediatric anaesthetist on the SCH Paediatric Epidural Infusion Chart. Suggested protocol: Starting rate: 0.1mL/kg/hour Maximum rate: 0.3mL/kg/hour Bolus as prescribed, usually 0.1−0.2mL/kg
Route	Via epidural infusion NOT FOR INTRAVENOUS ADMINSTRATION UNDER ANY CIRCUMSTANCES
Preparation/ Dilution	Ropivacaine 0.1% (1mg/mL) in a 50mL pre mixed bag. Obtain supplies from Pharmacy.
Administration	Epidural analgesia must be administered as a continuous infusion via the designated (Sapphire) epidural infusion pump. Refer to RHW Newborn Care Centre (NCC) management of epidural infusion policy and RHW Sapphire pump set up and priming policy for further details. Registered nurses in Operating Theatres, Paediatric Recovery or the NCC who have been assessed as competent may commence and care for a patient with an epidural infusion, change epidural bags or give boluses as per the prescription/guideline. Naloxone and full resuscitation equipment must be available while the epidural infusion is in progress. The epidural line must be labelled in accordance with NSW Health line labelling policy. The epidural infusion bag must be changed every 24 hours using a premixed bag where possible. Alternatively, a bag can be drawn up at the bedside with sterile technique by the consultant anaesthetist. Verbal or written consent from the parents must be obtained prior to epidural insertion.

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ROPIVACAINE 0.1% EPIDURAL IN NCC cont'd

Monitoring	Hourly observations: Respiratory rate, heart rate, pain score, sedation score, and rate of infusion and cumulative total volume infused. Motor block level should be monitored hourly for 6 hours then once per shift. 4 hourly observations: Temperature and blood pressure. In event of respiratory depression, hypotension or desaturation, or signs of CNS toxicity (as described in adverse reactions) the infusion should be ceased, supportive treatment instituted, and the anaesthetist informed. The patient should have intravenous access at all times. Epidural insertion site should be monitored at least once per shift. Epidural dressing to be left intact, if the dressing becomes loose the dressing should be reinforced but not removed (unless heavily soiled in which case contact the paediatric anaesthetist or APS.)
Contraindications	Local infection, anatomical abnormality of the spine or previous spinal surgery, neurological disease involving the spinal cord, coagulopathies, shock, raised intracranial pressure, allergy to local anaesthetic/opiate.
Precautions	Intravenous or oral opioid analgesia should not be used if epidural ropivacaine solution also contains opioids such as fentanyl . All analgesia should be managed by the consultant anaesthetist. Consider a dose reduction in patients with severe hepatic or renal impairment.
Drug Interactions	Epidural analgesia should not be used in conjunction with low molecular weight heparin or either anti-thrombotic therapy. Caution is advised with concurrent anti-arrhythmic drugs such as amiodarone. Caution should be used with concurrent use of CYP1A2 inhibitors such as theophylline and caffeine.
Adverse reactions	Central nervous system (CNS) toxicity. Signs of CNS toxicity are: Restlessness, tremor, light-headedness, muscular twitching and rigidity, which may precede convulsions and coma. Cardiovascular toxicity: Hypotension, bradycardia, arrhythmias and possible cardiac arrest may occur. Respiratory depression: A 'high spinal' may cause hypotension secondary to sympathetic blockade and respiratory depression and arrest due to depression of the respiratory centre. Other: Itch, urinary retention, weakness of the legs, infection and local haematoma.
Compatibility	Fluids and other drugs: Incompatible. Do not mix other fluids or drugs with epidural solutions.
Incompatibility	Fluids and other drugs: Incompatible. Do not mix other fluids or drugs with epidural solutions.
Stability	Once removed from the fridge pre mixed bags are stable at room temperature for 24 hours. Discard remaining ropivacaine 0.1% solution after 24 hours.
Storage	Pre mixed bags: Store at 2−8°C.

ROPIVACAINE 0.1% EPIDURAL IN NCC cont'd

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