
REGIONAL BLOCK ANALGESIA - SCH

PRACTICE GUIDELINE[®]

DOCUMENT SUMMARY/KEY POINTS

- Continuous regional analgesia must be prescribed by a medical officer.
- Continuous regional analgesia with local anaesthetic must be prescribed on the hospital approved 'Continuous epidural/regional infusion prescription and observation form' - indicating in box as to which type of infusion.
- Only those registered nurses assessed as competent in continuous epidural analgesia may hang bags and care for patients receiving continuous regional analgesia.
- Intravenous access must be maintained during the period of any continuous regional analgesic (local anaesthetic) infusions.

This document reflects what is currently regarded as safe practice. However, as in any clinical situation, there may be factors which cannot be covered by a single set of guidelines. This document does not replace the need for the application of clinical judgement to each individual presentation.

Approved by:	SCHN Policy, Procedure & Guideline Committee	Original endorsed by SCHN HCQC
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Team Leader:	Clinical Nurse Consultant	Area/Dept: Pain Services, SCH

CHANGE SUMMARY

- Due for mandatory review. No changes to practice.
- Replaces SCH Document of same title 7.R.2.

READ ACKNOWLEDGEMENT

- All Clinical Nurses and Medical Officers must read and notify their local manager that they understand the content of the document.
- Local managers will maintain records of read receipts for subsequent compliance and other audits.
- Only those Registered Nurses assessed as competent in continuous epidural analgesia may hang bags and care for patients receiving continuous regional analgesia.

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1 Introduction

Blockade of nerves with local anaesthetic is a method used for the relief of acute pain. It also produces sympathetic blockade, which can be beneficial following certain types of surgery. This regional method of pain relief using local anaesthetics can be used either alone or in combination with systemic analgesia. (It is sometimes necessary to provide adjunctive analgesia).

2 Standard

- Continuous regional analgesia must be prescribed by a medical officer.
- Continuous regional analgesia with local anaesthetic must be prescribed on the hospital approved 'Continuous epidural/regional infusion prescription and observation form' - indicating in box as to which type of infusion.
- Only those registered nurses assessed as competent in continuous epidural analgesia may hang bags and care for patients receiving continuous regional analgesia.
- Intravenous access must be maintained during the period of any continuous regional analgesic (local anaesthetic) infusions.

Outcomes

- Continuous regional analgesia is administered in a safe and effective manner, in accordance with hospital policy.
- Improved analgesia and earlier mobilisation.

3 Guidelines

Continuous Regional Analgesia may be used for:

- **Brachial plexus block:** The infusion of local anaesthetic via a catheter placed near the brachial plexus produces brachial plexus block. The analgesia obtained covers almost the entire upper limb.
- **Extra pleural block:** Involves the infusion of local anaesthetic via a catheter, inserted by a surgeon, under direct vision external to the parietal pleura alongside the vertebral column. This technique provides excellent analgesia in lateral thoracotomies with a significant reduction in opioid requirements.
- **Femoral nerve block:** These infusions are used for the relief of pain and muscle spasm following trauma – usually a fractured femur and/ or lower limb surgery. Local anaesthetic is infused via a catheter inserted in the femoral nerve sheath.

4 Ordering

- The prescriber must follow guidelines for prescribing medications.
- The prescription must be ordered on the Continuous Epidural/Regional Infusion Prescription and Observation form.
- **Standard Solution:**
Ropivacaine 2mg/mL at 0.2mL/kg/hr (to a maximum of 0.4mL/kg/hr)

NOTE: In certain clinical situations higher strength local anaesthetics may be used at a lower rate of infusion.

5 Care of a Continuous Regional Analgesic Infusion

- An epidural or specifically designed catheter can be left insitu for 2-3 days. To prevent displacement of the catheter, firm fixation of the catheter to the skin is recommended.
- Run the infusion via a GemStar pain management pump. Polybags to be changed every 24 hours.
- **Observations:**

Temperature, Pulse Respiration	Hourly for first 6 hours, then 4 hourly if stable
Blood Pressure	Hourly for first 6 hours, then 4 hourly if stable
Pain score and infusion totals	Hourly (Pain scores only if awake)
Site Check (for inflammation, discharge or haematoma)	4 hourly
<i>NOTE: If a dressing covers the site, observe dressing for ooze and any increase in peripheral temperature.</i>	
<i>Patients with Extra Pleural Infusions must have continuous pulse oximetry for the duration of the infusion.</i>	

- Regular analgesia as per orders must be given (if prescribed).

6 Management of Complications

Unrelieved pain

- Check site for excessive leaking and displacement of catheter.
- Consider giving bolus dose or supplement with systemic analgesia (if prescribed)
- Contact Acute Pain Service

Leakage of blood or fluid

- Check connections and insertion site
- Contact Acute Pain Service and Surgical Team

Haematoma, abscess or oedema at insertion site

- Stop infusion
- Contact Acute Pain Service and Surgical Team

Signs of Local Anaesthetic toxicity

Such as:

- Facial numbness
 - Twitching
 - Tinitis
 - Dizziness
 - Seizures
- Stop infusion
 - Contact Acute Pain Service

Note: Horner's syndrome when local anaesthetic is administered via an extra pleural catheter infusion is a rare complication but is not a sign of local anaesthetic toxicity.

Horner syndrome, also referred to as oculosympathetic paresis, is a classic neurologic constellation of ipsilateral blepharoptosis, pupillary miosis, and facial anhidrosis resulting from disruption of the sympathetic pathway supplying the head, eye, and neck and is reversible upon ceasing the infusion.

7 References

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4. Rosenberg, H., 1994. Use of nerve blocks in the treatment of post-operative pain. *Pain Digest* 4:110-114.
5. Blechman KM, Zervos M. Post-thoracotomy Horner syndrome associated with extrapleural infusion of local anesthetic. *Interact CardioVasc Thorac Surg*, 2009. 9:309-310

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