Pain Management for LSCS/post Birth Suite patients at Cairns Hospital – (CH)

Pain post LSCS
If a patient has pain
- Encourage the patient to use the bolus button or press the button yourself.
  - Epidural pethidine takes approx 15 minutes for effect.
  - PCA bolus opioids take approximately 5 minutes for initial effect
- Check the epidural catheter site and connections for leaks (a small amount of haemoserous fluid at the epidural catheter site is normal)
- Make sure patient has had other regular analgesics. If prn tramadol is prescribed give that.
- If pain is still unrelieved, contact the Acute Pain Service (APS) registrar/nurse.
- If pain is one sided, tilt the patient onto painful side for approximately one hour and get the patient to give herself another bolus. The epidural pethidine solution will infuse to this side.
- Parecoxib given in theatre is a long acting anti-inflammatory. If this has been given in theatre oral non-steroidals cannot be given for 18-24 hours.
- Oxycontin is long acting oxycodone and is often prescribed with a PCA or epidural. The dose released per hour is very small and the aim is to provide analgesia while the patient is unable to press the PCA or epidural button (ie asleep). 10mg Targin or Oxycontin is 10 mg released steadily over 8 to 12 hrs.
- Targin is Oxycontin combined with naloxone and is designed to reduce constipation from oxycontin.

Hypotension
Hypotension with an epidural is common in the first 24 hour postoperative period. It is usually a reflection of hypovolemia but is exacerbated by the peripheral vasodilation effects of local anaesthetic.
Treatment is generally to give fluid.
Do not tilt the head of the bed down, as it is not necessary, and may weaken respirations due to spread of epidural drugs affecting intercostal nerves. Lying patient flat is all that is required.

Nausea
Post operative nausea/vomiting (PONV) may be due to hypotension, opioids and the type of surgery itself (for instance, gynaecological and knee operations have a high incidence of PONV). The anti-emetic protocol is on the back of all Acute Pain Service order sheets.
Check B/P as hypotension is a common cause of nausea.
Treat nausea promptly (wait only 20 minutes before giving the next drug). If nausea is severe two anti-emetics are better than one. If metoclopramide, ondansetron or droperidol do not relieve the PONV, give promethazine (as ordered for itch) provided the patient is not in respiratory distress.
If nausea persists despite all treatments, notify the registrar as either the opioid needs changing or the patient needs reassessment for ileus.
Itch
All opioids can cause itch however epidural and spinal morphine have a greater incidence of itch and this can be long lasting up to 24 hours. Treat itch with naloxone or promethazine until itch improves (within 24 hours).

Leg movement
Post LSCS/birth suite delivery motor blocks should return within 4 to 6 hours of last dose local anaesthetic or pethidine as pethidine has some anaesthetic properties. Assessment of motor strength should be performed four hourly while the patient is awake by asking the patient to flex ankles or straight leg raise. Prior to getting out of bed patients should be able to bend the knee or perform a straight leg raise.
Record on Postnatal QMEWT.

Unacceptable motor block is dense and bilateral (i.e. no movement or sensation in both legs) or unable to flex ankles. For dense bilateral motor blocks notify the anaesthetic registrar, check observations (especially HR, B/P, respiratory rate) and turn the epidural off. Accidental dural migration must be ruled out by an anaesthetist.

Leg weakness is usually the effect of local anaesthetic infusions, however persistent or late onset leg weakness could be a sign of:
1. spinal cord compression (epidural haematoma, abscess or nerve trauma from insertion)
2. inadvertent spinal block (epidural drugs are being delivered into CSF instead of epidural fat, or into the subdural space – see section page 2)
3. or as a result of nerve stretching/ trauma due to the surgical procedure or delivery.

Urinary retention
All LSCS patients with post operative pethidine epidurals will require an IDC as pethidine prevents the ability to void. Once the pethidine has been ceased there should not be any ongoing problems due to the pethidine. If difficulties with bowel or bladder control persist you must contact the anaesthetic department along with the obstetric team.

Other general notes
The epidural tubing shall not be disconnected from the filter, except by APS staff when attending patients with inadequate pain relief. Catheter disconnections increase the risk of epidural abscess.
IV access should be maintained at all times.
The pump must not get wet.

NEVER remove an epidural without APS consultation.
NEVER remove an epidural if platelets are low.
NEVER remove an epidural if clexane has been given within the last 12 hours or Na heparin given within 6 hours.
Epidurals and anti coagulation

The risk of developing an epidural haematoma occurs when the catheter is inserted or removed when the patient is anti-coagulated. The results can be catastrophic – permanent paraplegia. Clinical presentation is usually:

- Motor weakness > 6 hours after the last top-up or cessation of anaesthetic infusion
- Unexplained urinary retention
- New onset severe back pain

Investigation by urgent magnetic resonance imaging (MRI) and subsequent decompressive laminectomy to prevent paraplegia is required.

Prior to epidural catheter removal:

- The patient has not been on regular oral anticoagulants.
- Enoxaparin (Clexane) has not been given in the previous twelve (12) hours.
- Sodium Heparin has not been given in the previous six (6) hours.

**Due to the risk of epidural haematoma, no heparin infusion or warfarin therapy is to be administered until the epidural is removed.**

Following epidural catheter removal:

Wait a further 2 hours before giving subsequent heparin injection.

**Epidural Infection**

Meningitis and epidural abscesses are very rare. Abscess formation is usually a late development (usually approximately 10 days from contamination), however they have been known to occur on day three (3) of epidural duration. The predominant causative organism is staphylococcus aureus. For this reason minimal breaking of the epidural line is required i.e. bag changes only when empty or at 3 days, and no disconnections for showering/mobilising.

Symptoms of epidural abscess are back pain, neurologic deficit (i.e. limb weakness, urinary retention), fever and headache. Management includes early detection and urgent surgical evacuation of abscess.

Epidurals are inserted under strict asepsis and the infusion line must not be broken (bag changes excluded).

**Accidental dural puncture**

This can result in ‘inadvertent spinal block’ or Post Dural Puncture Headache (PDPH).

**Inadvertent Spinal Block:**

This may occur if the epidural catheter is inadvertently infusing into CSF in the intrathecal space (“Spinal”) instead of infusing into the fat in the epidural space. Spinal analgesia requires significantly smaller doses than epidural doses. Consequences may be increased sedation, respiratory depression, hypotension, extensive motor block and cardiorespiratory arrest. Paralysis of the legs should alert clinicians to the possibility of subarachnoid injection.
PDPH:
Accidental dural puncture during needle insertion can cause CSF to leak from the subarachnoid space into the epidural space. The resulting headache is typically postural in nature, which is worse on sitting or standing and usually disappears completely when lying flat. First line treatment is with analgesics and caffeine, however a blood patch may be required if the headache is severe. This requires injection of the patient’s own blood into the epidural space to seal the punctured site.

Local anaesthetic toxicity.
Ensure all administered local anaesthetic doses are recorded on the medication chart. In normal circumstances toxicity due to systemic absorption from epidural infusions is not a problem; however additional doses given for episiotomy suturing may cause toxicity. Early signs are restlessness, oro-facial tingling/numbness, altered mental state and slurred speech. With higher blood concentrations symptoms are muscle twitching, convulsions, arrhythmias and cardiac arrest.

Where to get assistance
If you have been allocated a patient with an epidural and are unfamiliar with the Gemstar infusion pump or epidurals, the observations required are explained on the APS order sheet. Your team leader should go through the pump with you. The desk top CBH web site (see Policies and Procedures: Acute Pain” also explains Gemstars and epidural management. If you need to make a change to the settings or change the solution your second checking nurse needs to be very familiar with the pump and settings. If it is after hours and you are not working with staff who know the pump, call the nurse manager, resource allocation and he/she can send someone with experience to check with you. Set up sheets are in the recovery department – these explain step by step how to et up for a morphine/ fentanyl PCA etc.

Gemstar infusions sets
Epidural sets are yellow striped and have no side ports to guard against accidental injection. These are different from the PCA sets.

Requirements for removing epidural.
1. Patient wants it out!
2. APS has been contacted before epi removed.
3. No clexane given in the last 12 hours minimum.
4. No sodium heparin 5000 u/s has been given in the last six hours.
5. No warfarin given post op.

Reference List
Pain Management for LSCS/post Birth Suite patients at CH
Knowledge Assessment questionnaire

Name: ____________________________________________
Date: ____________________________________________

Your patient with an epidural wants it removed. What will you do?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

When can you remove an epidural if heparin 5000 s/c has been given at 0600 hours?
________________________________________________________________________

When can you remove epidural if enoxaparin (clexane) has been given at 0800 hours?
________________________________________________________________________

If the epidural has already been removed, when can you give heparin?
________________________________________________________________________

If your patient with an epidural experiences pain, outline your actions.
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________

What do you do if a patient with an epidural experiences pain that is one sided?
________________________________________________________________________
________________________________________________________________________
________________________________________________________________________
What will you do if the patient is hypotensive?
__________________________________________________________________________________________

What do you do if the patient is unable to move both legs and has no sensation (bilateral dense block)?
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________
__________________________________________________________________________________________

How do you test for the patient’s ability to mobilise with an epidural?
__________________________________________________________________________________________

How often should you test for leg weakness?
__________________________________________________________________________________________

Where should you record leg weakness?
__________________________________________________________________________________________

What are three early symptoms of local anaesthetic toxicity?
__________________________________________________________________________________________
__________________________________________________________________________________________

When completed can you please forward to the Midwifery Educator for marking. Successful completion of the information and knowledge assessment will earn 2 Continuing Professional Development (CPD) points.