1.0 OBJECTIVES

1.1 Regional analgesia/anesthesia is made available for the obstetrical patient for pain control during labour and to provide anaesthesia for vaginal operative delivery. Epidurals provide levels of pain control while minimizing sympathetic/motor block and allowing some pelvic floor tone. The epidural catheter may also be used to provide anesthetic/analgesia for patients who require Cesarean Section during the course of their labour.

*Physician or Anaesthetist to educate patient

2.0 MANAGEMENT AT INITIATION OF EPIDURAL

2.1 IV Access/Therapy

- Ensure an intravenous access is established prior to insertion of the epidural.
- Routine intravenous fluid bolus/pre-load is not always required prior to initiation of a low dose epidural.
- If the patient is at risk for hypotension (i.e. low baseline blood pressure, dehydration, antepartum bleeding) or if a more concentrated medication is being utilized, review need for pre-load bolus with anaesthetist.

2.2 Initial Nursing Actions

- Ensure consent is obtained and signed. The anesthetist is responsible for explaining potential complications.
- Obtain a 20 minute fetal monitor strip prior to the procedure and assess it to determine that there are no noted issues.
- Obtain baseline BP, pulse, respiration and oxygen saturation.
- Attach patient to pulse oximeter and automatic BP device.
- Ensure oxygen and suction are functional.
- Assist to position patient according to anesthetist’s preference.
- Auscultate FHR during procedure, if possible.
- Anesthetist secures catheter.

3.0 ASSESSMENT AND MAINTENANCE GUIDELINES

3.1 Initial Assessments and Documentation

- Blood pressure, pulse and respirations should be assessed and documented q 2
minutes x 15 minutes, then q 15 minutes x 45 minutes

- It is recommended that continuous external fetal monitoring (EFM) be implemented during the first hour following initiation of an epidural. Documentation of fetal heart rate (FHR) should be q 15 – 30 minutes as per Fetal Health Surveillance Policy.
- Assess dermatome and motor block within 30 minutes of initiation of epidural.
- Please note some Anaesthesiologists may request pulse oximetry and initiation and/or more frequent monitoring.

3.2 Ongoing Assessments and Documentation

- Assess and document BP, pulse and respirations q hourly unless maternal condition indicates more frequent assessment.
- Assess and document FHR q 15 – 30 minutes as per Fetal Health Surveillance Policy.
- Intermittent Auscultation is an acceptable means of obtaining FHR in low risk patients with an epidural. EFM should be implemented according to Fetal Health Surveillance Policy.
- If there are periods where maternal hypotension is a concern, the hypotension should be treated and EFM should be considered until the mother and fetus are stable.
- Assess BP, pulse and respiration every 5 minutes for the first 15 minutes following re-bolus by Anaesthesia.

3.3 Assessment and Management of Level of Sensory and Motor Block

- Assess sensory and motor block hourly. Ensure block is not unilateral or too high. Ideally block should be between T₆ – T₁₀.
- Change maternal position at least every hour.
- Modify rate of epidural infusion as indicated as per anaesthetist’s orders.

3.4 IV Therapy

- If preferred, a saline lock can be used if the patient wants to ambulate or the IV tubing is bothersome.

3.5 Management of the Bladder

- Prior to insertion of the epidural the patient should be encouraged to empty her bladder.
- Assess bladder hourly for distension by palpation / bladder scan.
- Encourage patient to void hourly. Document urine output volume at least every 2 hours.
- Ambulation to the bathroom or use of a bed pan is an alternative to catheterization.
- An indwelling foley or In & Out catheter may not be necessary if the patient has bladder sensation and the ability to void adequately or if nearly fully when epidural is initiated and has emptied her bladder.
• If the patient is unable to adequately void, an indwelling foley catheter should be inserted, the bulb inflated and the foley secured with tape to the patient’s leg. The catheter bag should be secured to the bed and not placed on the floor. Vaginal examination for bulb placement is not indicated.

4.0 GUIDELINES FOR AMBULATION

4.1 Ambulation Criteria

• An assessment should indicate that there are no nursing, anaesthetic or obstetric contraindications for ambulation.

• An RN must remain in constant attendance.

• The following patient criteria must be met prior to ambulation:
  o No ambulation is allowed in the first 30 minutes after the initiation of the epidural or re-bolus, including PCEA.
  o Dermatome level T₈ or less.
  o The patient can do a straight leg raise in the bed.
  o There is no evidence of hypotension when sitting/dangling.
  o The patient can perform a partial knee bend at the bedside.

4.2 Intrapartum Ambulation

• The syringe pump can be attached to the patient’s intravenous pole during ambulation.

5.0 MANAGEMENT OF EPIDURAL MEDICATION AND ADMINISTRATION RATES

5.1 Written orders will be signed by the anaesthetist for ongoing management.

5.2 After pharmacy hours, if a top-up or bolus of medication is required, the anaesthetist must be notified.

5.3 Extra syringes will be stored in the medication fridge or mixed by pharmacy or anaesthetist.

5.4 Mini medication bags are to be mixed and labeled by anaesthetist.

6.0 MANAGEMENT OF THE SECOND STAGE

6.1 Initial Assessments

• At the time that full dilation a thorough assessment of fetal station, position and presence of caput is necessary.

• Determine if the patient has the urge or sensation to push.

• Check the dermatome and motor block. Determine if there is adequate analgesia and assess the ability to bear down.

6.2 Documentation in the Second Stage

• Assessment and documentation of FHR is necessary.

• Dermatome and motor block continue to be assessed and documented every hour.

• Document any changes in rate of epidural infusion or any bolus the patient may receive.

• Document vaginal examinations and sensation/pushing efforts.
• Visual or vaginal assessments of descent of the presenting part, position and rotation should be documented.
• Document communication with primary care physician, management plan and any intervention performed.

6.3 Management Considerations during Second Stage
It is very important that each patient’s needs to be thoroughly assessed and a management plan developed. This plan is often informal but dialogue between the physician, nurses and/or patient is recommended. A team approach based on accurate assessments is ideal.

6.3.1 No Sensation or Urge to Push
If the patient does not have the sensation/urge to push, the epidural rate is adequate and there is no suspected fetal compromise, no intervention is necessary. Periodically reassess sensation or urge to push. In 1 hour reassess descent/station, caput and ability to bear down.

6.3.2 Sensation and/or Urge to Push
• Encourage the patient to push with each contraction at the physician’s request or maternal or fetal condition warrants pushing.
• If a foley has been inserted and active pushing is encouraged the foley bulb should be deflated to protect the bladder/urethra. No immediate action is required if the foley slips out.
• On Average, the presenting part should be visible with adequate pushing efforts at approximately 1 hour for primiparous patients and ½ hour for multiparous patients. If your patient is not within these parameters:
  o Reassessment for possible causes and interventions may be necessary.
  o squatting bar is an option to be considered if ambulation criteria have been met.
  o Dialogue with another obstetrical nurse and/or physician for further instructions/management may be necessary.

6.3.3 Operative Delivery
In the event that a forceps or vacuum delivery is required, consultation with the anaesthetist may be necessary

7.0 AT DELIVERY AND IMMEDIATE RECOVERY PERIOD

7.1 Epidural Infusion Rate/Discontinuing Epidural Catheter
• The epidural infusion should be turned off at the time the placenta is delivered.
• The epidural catheter should be removed prior to transfer to the postpartum room. It is important to ensure that when the catheter is removed that the tip is intact. Documentation of removal is required on partogram.
• The IV site must be maintained for at least 4 hours and a saline lock is acceptable.
• Delay of removal may be necessary for those patients who are at risk for:
  o Manual removal of the placenta.
  o Actual or threatened postpartum hemorrhage.
  o Operative repair of perineal or cervical lacerations/extensions. In the event that the patient requires an extensive vaginal repair the anaesthetist may consider an injection of Epi-Morph for pain management.
  o Post-dural puncture headache.

7.2 Ambulation Post-Partum
• An assessment of the dermatome level and motor block is done.
• Ambulation criteria must be met prior to ambulation.
  o Dermatome level T₈ or less
  o Patient can do straight leg raise in bed
  o No evidence of hypotension when sitting/dangling
  o Patient can be partial knee bend at bedside
• The nurse must be in constant attendance while ambulating if there is evidence that the epidural is still effective

7.3 Management of the Bladder Post-Partum
• Adequate assessment of bladder distension is required either by palpation / bladder scan.
• A foley catheter does not need for be (re) inserted unless indicated.
• Communicate to the post-partum staff assessments and interventions regarding bladder management.

7.4 Management of the Epidural Catheter Post Cesarean Section
• The epidural catheter is removed prior to discharge from the recovery room unless specifically ordered by the anaesthetist.

Patient ambulating during a continuous infusion MUST have a nurse.
• The duration of diminished motor effect depends on the concentration of anaesthetic as well as blood supply to the region.
• Epidural administration usually takes longer to take effect because it has to diffuse across the dural mater and into the CSF. In labour, small doses of anaesthetic are given epidural and the effects usually recede within 1 – 2 hours after last dose.
• When patients have had a sensory motor block intra-operatively (i.e. for cesarean sections), the spinal injection is usually effective almost immediately. The anaesthetic agent is administered right into the CSF as a bolus. It usually takes 3 – 4 hours before the block has receded enough for the patient to safely ambulate.
• Patients who have had regional anaesthesia need to be thoroughly assessed prior to ambulation. When they have had an epidural sensory motor block, the time it takes for the effects to recede vary depending on the degree of block. Patient must have full motor function and adequate sensation before attempting to ambulate. During initial ambulation, a nurse must be present for further assessment and assist the patient as required. Assessments should be documented on the Care Map / Partogram.

• The following nursing management criteria are included for safe assessment of motor skills of patients post-op caesarean section. If the patient is unsuccessful in the task wait up to 1 hour and repeat before proceeding to the next task.

<table>
<thead>
<tr>
<th>Nursing Management for Safe Ambulation Post Sensory Motor Block</th>
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<tbody>
<tr>
<td>• Patient lie in bed on back or lateral position with head slightly elevated.</td>
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<tr>
<td>• Request the patient to raise one leg at a time.</td>
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<tr>
<td>• Request the patient to sit up. If lightheaded, lie back down and rest.</td>
</tr>
<tr>
<td>• Dangle at the side of the bed. If lightheaded, lie back down and rest.</td>
</tr>
</tbody>
</table>
8.0 REFERENCES


Evidence-Based Clinical Practice Guide. Nursing Care of the Woman Receiving Regional Analgesia/Anesthesia in Labor. AWHONN (2001).


