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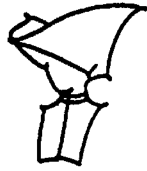


PROVIDENCE HOSPITAL

POLICY & PROCEDURE MANUALS

Providence Hospital
6801 Airport Blvd
Mobile, AL 36608

NURSING DIVISION

Section: POLICY & PROCEDURE
Subject: EPIDURAL/INTRATHECAL: TEMPORARY CATHETER NURSING CARE MONITORING

POLICY:
An RN who has completed a hospital-developed program may manage the care of a patient with an epidural or intrathecal catheter used to alleviate post-surgical pain, pathological pain, trauma pain. This includes reinjection of analgesic medications or adjustment of a continuous infusion rate under the following restrictions.

A. Requirements for an RN to manage the patient receiving analgesics/anesthetics via a temporary epidural/intrathecal catheter.
   1. Completion of a BLS program.
   2. Completion of a hospital - developed education program.

B. Nursing responsibilities include:
   1. Assessing the patient for pain control and adverse effects.
   2. Observing the catheter and dressing for intactness.
   3. Starting and stopping the infusion pump. A test dose of the drug in the pump should have been given by anesthesia staff before an RN may start a pump. A pump may be stopped and restarted with an anesthetic admixture if no dosing changes are being made.
   4. Redosing the catheter with an analgesic medication when a specific dose is ordered (no prn dosing) and increasing and decreasing the rate of a continuous analgesic infusion (narcotic) when a specific rate is ordered.
      NOTE: This does not apply to anesthetics such as bupivacaine or to potent narcotics i.e., Fentanyl or Sufentanil. (See Number 7)
   5. Hanging new infusion bags. An RN may hang a new bag of analgesics. A new bag with an analgesic/anesthetic admixture may be hung if no changes are being made to medication dosing.
   6. Changing continuous infusion tubing, filters and injection caps every 72 hours.
   7. An RN may NOT administer bolus doses of potent narcotic analgesics (i.e. fentanyl and sufentanil) or any anesthetic agent (i.e. bupivacaine).
   8. An end of shift count should be performed by two nursing personnel and documented on Pain Management Flow Sheet.

DEFINITION:
Direct placement of low dose pain medication in the intraspinal space can block pain without the undesirable central nervous system effects seen with high-dose parenteral administration. A temporary catheter can be inserted into the epidural space (the area above the dura mater) or into the intrathecal space (below the dura). The intrathecal space (or subarachnoid space) contains cerebral spinal fluid which bathes the spinal cord. Opiates bind at the receptor sites on the dorsal horn of the spinal cord thereby blocking pain transmission.

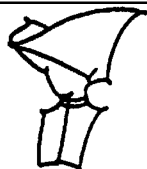
A. Monitoring the patient receiving temporary epidural pain management.

EQUIPMENT:

Continuous IV line or intermittent IV line.
Bag-Valve-Mask (B-V-M) device immediately available.
1 amp Naloxone (Narcan) with syringe/needle available.
Pulse Oximeter

PROCEDURE:

1. The patient should have a patent IV access in place during and for 4 hours after the dosing via an epidural catheter while receiving pain medication. A different number of hours for IV access may be specified by anesthesia personnel..
2. Have 1 amp of Naloxone (Narcan) 0.4 mg/ml and a bag-valve-mask device readily available at all times until 4 hours past last epidural dosing. Contact anesthesia for untoward effects.
3. The patient should not receive any other CNS depressants, i.e. narcotics, sedatives, or anti-emetics by other routes (without prior notification of anesthesiologist) while receiving epidural medication. This may occur when several physicians are ordering for the patient. Contact anesthesia before administering these drugs.
4. Bolus doses by direct epidural injection or infusion pump may be ordered for break-thru pain. The level of consciousness, respiratory status and pain level should be assessed and documented prior to each bolus dose. An RN may not bolus an epidural catheter with fentanyl, sufentanil, bupivacaine or other anesthetic agents. Bolus doses should be verified by a second epidural trained RN prior to administration.
5. Attach a pulse oximeter to the patient to provide oxygen saturation readings as ordered.
6. Assess and document respiratory rate, pain level and sedation level every 30 minutes times 2, then every 1hour times 24 hours, then every 2 hours times 24 hours, then every 4 hours for the duration of the epidural.
7. Assess the patient's respiratory status. Keep head of bed elevated unless contraindicated. Notify anesthesiologist for change in respiratory status.
8. Assess for level of sedation. Notify anesthesiologist if patient has moderate-severe sedation (sedation level of 3-4).
9. Assess vital signs (pulse, BP, temp) per unit protocol.
   For Anesthetic Admixtures: assess vital signs (pulse, BP, temp), sensory level, motor function, and skin anesthesia level every 30 minutes times 2, then every 2 hours times 24 hours, then every 4 hours for duration of the epidural.
10. <u>EMERGENCY TREATMENT FOR RESPIRATORY DEPRESSION AND SEVERE SEDATION:</u>
    If respiratory rate is less than 8 (RR<8) or oxygen saturation is less than 90% (SAO2<90) with shallow respirations and patient is unresponsive:
    - Turn off epidural infusion
    - Open airway
    - Give Naloxone (Narcan) 0.4 mg/ml – dilute 1ml in 9ml of 0.9% NaCl, give 2ml IV



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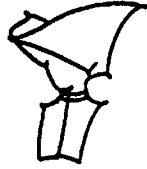
slowly every 2 min. until respiratory rate > 10 per minute.
Notify anesthesia immediately.
Initiate artificial ventilations by bag-valve mask if needed

11. Observe for orthostatic hypotension. Postural BP/P prior to ambulation day 1 and 2. Assist with ambulation (if allowed) until 8 hours past last epidural dose. Call anesthesiologist before ambulating any patient who has received an anesthetic agent (bupivacaine, etc.).
12. Assess for sensory level and motor function if anesthetic agent has been administered. Notify anesthesiologist for numbness or absence of feeling, severe motor weakness or weak hand grasps.
13. Assess pain control. Increase in level of pain may indicate catheter displacement, catheter/tubing occlusion or disconnection. Increasing discomfort may also be caused by other complications from the surgery or previous illness (i.e., pulmonary embolus, angina, etc.) Notify anesthesia if pain control is not satisfactory. (On a pain scale of 0-10, notify if greater than 3).
14. Assess urinary output and bladder for distention (consider bladder scan if appropriate). Call anesthesiologist if the patient is unable to void in 6 hours or bladder discomfort or distention is present.
15. Assess pressure areas, especially if skin is in contact with any device (i.e., orthopedic). Encourage the patient to move frequently and shift his weight.
16. Itching may occur with epidural narcotic drug, especially around the face, head and neck. Notify the anesthesiologist if itching is not relieved by prn medication or if none is ordered.
17. Observe for nausea and vomiting. Call anesthesiologist if severe nausea or vomiting occurs or no relief from prn medications.
18. Maintain an occlusive, dry dressing over the catheter site. Notify the anesthesiologist if the dressing is loose or catheter appears dislodged.
19. Observe exit site under dressing for signs of infection or inflammation. Notify the anesthesiologist for exit site problems or wet dressings. Continuous infusion tubing, filter and injection caps are changed every 72 hours by an RN.
20. If the catheter becomes dislodged, notify the anesthesiologist and check if catheter tip is intact and notify anesthesiologist.
21. Do not hang any other bags of fluids or push any drugs through this catheter except for preservative-free analgesic and/or anesthetic agents. Do not flush this catheter.
22. Label catheter tubing and pump (if in use) as "epidural". Tape over any injection ports in tubing if present to prevent accidental administration of IV meds.
23. Document as appropriate on Pain Assessment and Narcotic Record, MAR, Focus Notes and PCA Wastage Form.

B. **EPIDURAL CATHETER DISCONNECT**

An RN/LPN who has completed a hospital developed or approved program may cover the end of an epidural catheter which has disconnected from its adapter or infusion tubing.



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EQUIPMENT

Sterile gloves
2"x2" dressing
Tape

PROCEDURE

1. Stop the epidural infusion
2. Using sterile technique, wrap the tip of the epidural catheter with a sterile 2"x2" dressing and secure with tape.
3. Wrap the disconnected end of the catheter infusion tubing with a sterile 2"x2" dressing.
4. Notify anesthesiologist that a disconnect has occurred.

DOCUMENTATION

1. Document the catheter disconnect in the focus notes..
2. Document that the catheter end and tubing end were covered with sterile 2"x2" dressings and anesthesiologist notified.

C. **EPIDURAL CATHETER REMOVAL**

An RN who has completed a hospital approved organized program of study may remove an epidural catheter when therapy has been completed.

KEY POINT – PATIENT ON **ANTICOAGULENTS**

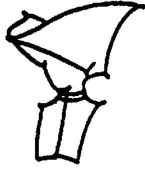
A. Insure that order has been given by physician to remove the catheter.
B. Contact anesthesiologist for an order to remove a catheter from a patient who has been on anticoagulants.
C. Inform anesthesiologist of last dose anticoagulants administered and determine the appropriate time to remove the catheter.

EQUIPMENT

Gloves
Alcohol preps
Dressing Adhesive
Warm water and wash cloth

PROCEDURE

1. Gather supplies
2. Explain procedure to the patient.
3. Stop the analgesic infusion.
4. Ask patient to assume sitting or side-lying position with back exposed and arched out toward nurse.
5. Put on gloves.
6. Gently remove tape from back and shoulder to expose epidural catheter site.



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7. Holding epidural catheter at insertion site, apply gentle, steady traction to remove it. Epidural catheters are inserted approximately 3 - 5 cm and should come out easily. Do not pull on catheter vigorously. If resistance is met, stop and notify the anesthesiologist.
8. After removal, check the tip of the catheter for the presence of a mark indicating that the catheter tip is intact. If the mark is absent, notify the anesthesiologist.
9. If removal is uncomplicated, discard the epidural catheter as hazardous waste. If removal is complicated in any way, keep the catheter and notify the anesthesiologist.
10. Cleanse the patient's back of blood and secretions with warm water and washcloth.
11. Cleanse the epidural catheter site with alcohol prep. Notify the anesthesiologist is epidural catheter site is red, sore, edematous, or draining purulent material.
12. Cover the epidural site with adhesive dressing.
13. Inform the patient of new analgesic orders and what to expect from the new form of medication.
14. Waste unused drug remaining in the epidural pump in accordance with policy.
15. Discard analgesic infusion tubing and bag.
16. Place pump at nurses station for pick up by pharmacy.

DOCUMENTATION:

1. Complete Pain Assessment and Analgesic Record and Focus Notes, MARs and Narcotic Waste Record as appropriate.
2. Document condition of catheter tip (intact) and witnessed by another RN.

APPROVED BY: Department of Surgery, January 22, 2002
Medical Executive Committee, February 4, 2002
Surveillance, Prevention and Control of Infection Committee, January 16, 2002
Pharmacy and Therapeutic Committee, January 8, 2002

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