



Epidural Infusion and Pain Management

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Objectives

- ✔ Define epidural analgesia
- ✔ State responsibilities of the RN caring for a patient with an epidural
- ✔ Describe appropriate actions for catheter disconnection or inadvertent removal
- ✔ Describe common side effects with appropriate nursing actions



Who Is Responsible for Epidural Management at MUHA?

- ✔ The Department of Anesthesia and Perioperative Medicine is responsible for the management of the epidural catheters and infusions.
- ✔ **No** other sedatives or opioids are to be given along with the epidural except as ordered per Anesthesia.
- ✔ If questions: page **Acute Pain Service (APS) #17784**.



Definitions

✓ Epidural analgesia:

- Regional anesthesia
- Involves administration of medications (local anesthetics, opioids, or both) as a single injection or a continuous infusion via an epidural pump into the epidural space.
- Epidural space: potential space that lies superficial to the dura mater surrounding the spinal cord.



Definitions

✓ Neuromotor blockade:

- unwanted side effect of epidural anesthesia from local anesthetics
- characterized by muscle weakness

✓ Sympathetic blockade:

- Blockade of sympathetic fibers with local anesthetics
- Especially in lower extremities can lead to vasodilation
- may make patient prone to lower blood pressure especially if dehydrated and/or elderly.



Procedures RNs May Perform Related to Epidurals

- ✔ Initiate an infusion
 - Connect tubing to newly placed epidural catheter once confirmation of placement of catheter by anesthesia or pain service is documented by a procedure note in progress note and on epidural orders
- ✔ Obtain a new infusion bag from pharmacy
- ✔ Change epidural bag using sterile technique
- ✔ Bolus the epidural catheter via the epidural pump
- ✔ Discontinue an infusion
- ✔ Remove an epidural catheter per order from the anesthesia, acute pain, or primary service.



Procedure for Initiating an Epidural Infusion

- ✓ Two RNs must perform and document independent double checks and verify orders when initiating or changing administration of an epidural infusion.



Maintenance of Epidural Catheters

▼ Insertion site

- Reinforce dressing as needed
- Monitor site for redness, swelling, tenderness, drainage
- Report drainage if other than serosanguinous or greater than 4 cm to Acute Pain Service (APS) #17784
- Report unusual findings to APS #17784



Maintenance of Epidural Catheters

- ✓ Maintenance of epidural tubing:
 - May continue to use the same tubing unless otherwise ordered by Acute Pain Service
 - Change only if the concentration or drug has been changed in the bag or
 - Change if the system has been contaminated by inadvertent removal or disconnection.



Question 1

- ✓ The actions the RN may take with an epidural catheter include which of the following:
 - A. Initiate & discontinue the infusion
 - B. Change an epidural bag using sterile technique
 - C. Bolus the epidural catheter via the epidural pump
 - D. All of the above



Question 2

- ✓ Maintenance of the epidural catheter insertion site includes:
 - A. Reinforcement of dressing as needed
 - B. Monitoring of site for redness, swelling, tenderness, or drainage
 - C. Report of drainage other than serosanguineous and > 4cm in diameter to APS ID 17784
 - D. All of the above



Removal of Epidural Catheter

- ✔ RN removing the epidural must either have completed annual pain competency or be directly supervised by an RN who has completed it.
- ✔ Ensure APS has written an order to remove the
- ✔ DO NOT pull on catheter vigorously; if resistance is met, stop and notify APS.
- ✔ After removal, check the tip of the catheter for the presence of a blue mark indication that the catheter is intact. If the blue mark is absent save the catheter and notify the APS.



Disposal of Unused Med

- ✓ If unused portion remaining in the epidural infusion bag contains *narcotics*, it must be wasted, witnessed and appropriately documented per medication policy



Inadvertent Removal of Epidural Catheter

- ✦ Inspect catheter for blue tip, indicating complete removal of catheter from epidural space
- ✦ Dispose of catheter
- ✦ Turn off pump
- ✦ Notify Acute Pain Service #17784
- ✦ Document appropriately.



CATHETER DISCONNECTION

- ✓ If catheter is disconnected from the tubing, but still remains in place at insertion site:
 - cover both the open catheter end and the tubing end with sterile gauze dressing
 - turn off pump and contact APS#17784

- ✓ **DO NOT RECONNECT!**



Question 3

✓ The RN may remove the epidural catheter per order from the anesthesia service or primary service.

A. True

B. False



Question 4

- If the epidural catheter is disconnected the appropriate intervention is to:
 - A. Cleanse the ends with alcohol and reconnect
 - B. Cover both ends with a sterile 4x4 and call APS at pager ID 17784
 - C. Cleanse the ends with ChoraPrep© and reconnect
 - D. Discontinue the epidural catheter



Clinical Safety Practice Points

A. ANTICOAGULATED PATIENTS

1. CAUTION: Epidural catheter is not to be removed from an anticoagulated patient except under specific orders by Acute Pain Service or primary care team.
2. CAUTION: Anticoagulation may not be initiated until at least 2 hours after removal of epidural catheter. Specific delay to initiate anticoagulation after epidural removal is determined by APS or primary care team.



Clinical Safety Practice Points

B. NEUROMOTOR BLOCKADE

These side effects can cause significant weakness with position changes and ambulation, therefore:

- ✔ Patients with epidural catheters are at risk for falls
- ✔ All patients must ambulate, initially, with assistance
- ✔ Place patient on fall precautions



Clinical Safety Practice Points

B. NEUROMOTOR BLOCKADE

Unilateral or bilateral numbness is common with an epidural placement - especially in lower extremities. If numbness becomes profound or more than minor motor block is identified:

- *FIRST: TURN OFF EPIDURAL INFUSION*
- Notify Acute Pain Service at # 17784
- Monitor respiratory status (DEPTH and RATE)
- Do not allow patient to ambulate



Clinical Safety Practice Points

C. SYMPATHETIC BLOCKADE

- ✓ **CAUTION:** Patients with epidural catheters are at risk for orthostatic hypotension.
 - Monitor carefully when moving from supine to standing position. Raise head of bed, then dangle legs, and watch for dizziness, lightheadedness, diaphoresis and loss of consciousness.
 - If patient exhibits significant symptoms, place in supine position (elevation of legs maybe helpful) and call Acute Pain Service at #17784.



Question 5

- ✓ Side effects of an epidural can include significant hypotension and/or weakness with position changes and ambulation.

A. True

B. False



NOTIFY ACUTE PAIN SERVICE FOR THE FOLLOWING:

- Difficulty or inability to remove epidural catheter
- Patient experiences pain or paresthesia (tingling) during removal
- Absence of blue tip on catheter. *SAVE THE CATHETER*
- Epidural site is painful, red, swollen, or draining purulent material.



Question 6

- ✓ Unilateral or bilateral numbness in lower extremities is a common complication of epidural anesthesia.

- A. True
- B. False



Question 7

- ✓ If a patient with an epidural experiences profound numbness or more than minor motor block is identified the **first thing** the RN should do is:
 - A. Turn off epidural Infusion
 - B. Notify Acute Pain Service at # 17784
 - C. Monitor respiratory status (depth and rate)
 - D. Do not allow patient to ambulate



✓ You have completed the module on
Epidural Infusion and Pain Management

Thank you!