

# Pediatric Epidural Management Guidelines

- Pediatric epidurals are generally placed under General Anesthesia in infants and small children. Older children and teenagers may get an epidural prior to induction of General Anesthesia.
- **AN EPIDURAL IS A SEGMENTAL BLOCK.** There is always an upper and lower level of the block.
- **A FUNCTIONAL EPIDURAL CAN BE LEFT IN SITU FOR UP TO 5 DAYS. 3 DAYS BEING THE AVERAGE**, as the rate of infection goes up thereafter.
- A **FUNCTIONAL EPIDURAL** is **DEFINED** as one which is providing optimal analgesia to the patient and is free of major side effects such as severe uncontrollable itching, respiratory depression and urinary retention (*see below*).
- **STANDARD EPIDURAL SOLUTIONS CONTAIN A COMBINATION OF LOCAL ANESTHETIC AND OPIOID.** Combining the two has an overall synergistic effect, and results in enhanced quality of analgesia.
- **SPLITTING AN EPIDURAL (TAKING THE OPIOID OUT OF THE EPIDURAL INFUSION MIX)** is discouraged since it decreases the overall effectiveness of the epidural.
- Standard Epidural dressing: CHG Impregnated Clear Tegaderm (3 months and over). Plain Tegaderm dressing with Mastisol adhesive is an alternative technique. CHG impregnated Tegaderm is not advised for premature babies and infants under 3 months of age. Some amount of ooze and leakage around the epidural catheter insertion site is normal.
- A patient with an epidural in the Pediatric Intensive Care Unit (PICU) **MAY RECEIVE SUPPLEMENTAL OPIOIDS** if necessary for optimal pain control. The patient must be monitored for respiratory depression.
- **PATIENTS ON ANTICOAGULATION NEED SPECIAL ATTENTION.** The epidural catheter should only be removed after consultation with the APS.

# Pediatric Epidural Management Guidelines

- **A PATIENT ON THE FLOOR WITH A FUNCTIONING EPIDURAL SHOULD NOT RECEIVE ANY SUPPLEMENTAL OPIOIDS. AS MENTIONED ABOVE A STANDARD EPIDURAL SOLUTION CONTAINS A COMBINATION OF LOCAL ANESTHETIC + OPIOID.** If epidural analgesia is less than optimal and cannot be rectified by the APS (Acute Pain Service), a decision to either split the epidural or remove the epidural catheter altogether must be made in consultation with all care teams.
- **SIDE EFFECTS OF EPIDURAL ANALGESIA** include itching, nausea, ileus, urinary retention, sedation and hypoventilation. These side effects can be managed based on guidelines and protocols listed on our Standard Epidural Order Sheet.
- **Does a Foley need to remain in place?**
  - For low thoracic and lumbar epidurals, the risk of urinary retention is high and a Foley is required as long as the epidural is in-situ. For high to mid thoracic epidurals (T4-T8), a Foley is not typically required as the nerves innervating the bladder are usually spared. In case of urinary retention in patients with a functioning mid to high thoracic epidural, (particularly in the early post operative period), placing a Foley catheter should be strongly considered in consultation with the primary surgical team. The Foley catheters may be removed 4 hours following cessation of an epidural infusion and removal of the epidural catheter.
- **When to call the ACUTE PAIN SERVICE (APS) - PAGER 2542?**
  - If there are signs of infection including tenderness, erythema, or purulent drainage at the insertion site or if there is fever with no clear source. The APS should also be contacted for severe motor weakness or loss of bowel or bladder function.

**Acute Pain Service (APS) PAGER 2542**

**On-Call Pediatric Anesthesiologist. Please call 6-4526 to have the Pedi Anesthesiologist paged**

# Decision Algorithm for Management of Pediatric Epidurals

## Acute Pain Service (APS)

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On-Call Pediatric Anesthesiologist  
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Division of Pediatric Anesthesia  
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Epidural placed in OR

### Patient Transferred to PACU

Epidural Infusion Pump is setup by Primary Pediatric Anesthesia Team.

Initial Epidural Orders are written

Functionality of Epidural is assessed.  
Troubleshooting as needed. Consider Chloroprocaine test / Omnipaque Dye Test

### Patient Transferred to PICU

Epidural Infusion Pump is setup by Primary Pediatric Anesthesia Team.

Initial Epidural Orders are written

Functionality of Epidural is assessed.  
Troubleshooting as needed. Consider Chloroprocaine test / Omnipaque Dye Test

Is the epidural functional ?

YES

NO

### Transfer Patient to FLOOR

Epidural is managed by the Acute Pain Service (APS) in consultation with Primary/ On-Call Pediatric Anesthesiologist.

Daily rounds are conducted and orders revised as needed

A functioning epidural catheter may be left in situ for up to 5 days (3 days is the average) before removal by APS team

If epidural becomes nonfunctional at any point, proceed with *"not functional guidelines"* in the pink box to the right.

**NO SUPPLEMENTAL OPIOIDS MAY BE ADMINISTERED**

Is the epidural functional ?

NO

YES

If Epidural is NOT FUNCTIONAL or becomes NONFUNCTIONAL at any point of time, the Primary Surgical Team and Acute Pain Service (APS) must be informed and consulted.

Options include:

- Remove/Replace Epidural Catheter
- Split Epidural (remove opioid from mixture)
- Standard PCA

Epidural is managed by the Acute Pain Service (APS) in consultation with Primary/ On-Call Pediatric Anesthesiologist.

Daily rounds are conducted and orders revised as needed

A functioning epidural catheter may be left in situ for up to 5 days (3 days is the average) before removal by APS team

**Supplemental opioids may be administered by the PICU team** for optimizing pain control after consultation with APS

**Prior to Transfer from PICU to FLOOR**, the functionality of the epidural must be assessed

NO

Is the epidural functioning adequately ?

YES

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