Acute Pain Service (APS) Role of Operating Room Anesthesia Care Providers

Anesthesia Protocol
University of Washington Medical Center
Department of Anesthesiology

Introduction

UWMC Operating Room Anesthesia Care Providers have the opportunity to enhance the quality of patients’ surgical experiences by initiating early and patient-specific planning for postoperative pain relief. Since some techniques used for postoperative pain relief have implications for intraoperative anesthetic care, both aspects are best considered together prior to induction of anesthesia. Certain patient groups (e.g., total joint replacement) will have standardized postoperative pain management plans developed jointly with the surgical staff. An updated list of treatment plans may be obtained from APS. Other patients (e.g., opioid-tolerant, thoracotomy, upper abdominal procedures) are at high risk for inadequate postoperative pain relief and careful planning is essential for minimizing discomfort in these patients. At the completion of surgery, APS will assume responsibility on your behalf for providing effective and safe relief using the approach you have initiated. Your understanding of how you can facilitate this transition is critical to this process.

The modalities most commonly used for postoperative pain relief are:

1) Neuraxial analgesia (single-dose subarachnoid morphine, epidural local anesthetics, repeated or single-dose opioids, or local anesthetic/opioid mixtures typically by PCEA)
2) Intravenous opioid administration by patient-controlled analgesia (PCA).
3) Regional analgesia by continuous catheter infusion

Below is some important information on each of these modalities.

Modalities

Postoperative Neuraxial Analgesia

Considerations

1) Continuous epidural techniques: Ideal candidates for this procedure are opioid tolerant patients undergoing major surgery, patients who will have an upper abdominal or thoracic incision, patients undergoing major lower extremity reconstructive surgery or patients who request an epidural technique. Most often, APS will recommend PCEA with a local anesthetic and opioid for postoperative pain control. High doses of bupivacaine (> 0.25%) should not be used intraoperatively. A key to the success of this procedure is preoperative testing of epidurals as recommended by APS. Appropriate epidural orders (Pain Service – Epidural/Intrathecal Analgesia Physician Orders) should be completed.
2) **Single-Dose Intrathecal Morphine:** Patients not suitable for this technique include opioid tolerant patients. Currently, patients undergoing minimally invasive total knee arthroplasty receive a single dose of preservative free morphine 100 mcg prior to surgery for postoperative pain relief. In addition, an IV PCA is commenced in PACU. Forms for this procedure include *Pain Service – Epidural/Intrathecal Analgesia Physician Orders* and *Pain Service Intravenous Patient Controlled Analgesia (PCA) Physician Orders*. Patients should be monitored according to epidural/Intrathecal guidelines with breakthrough pain being treated by PCA guidelines.

3) **Single-Dose Epidural Morphine:** We are currently trialing a new 48-hour sustained release epidural morphine (Depodur). Ideal patients are opioid-naïve patients under the age of 70 years undergoing abdominal surgery with a below umbilicus midline incision. In addition, an IV PCA is commenced in PACU for the management of breakthrough pain. Forms for this procedure include *Pain Service – Epidural/Intrathecal Analgesia Physician Orders* and *Pain Service Intravenous Patient Controlled Analgesia (PCA) Physician Orders*. Patients should be monitored according to epidural/Intrathecal guidelines with breakthrough pain being treated by PCA guidelines.

### Intravenous Patient-Controlled Analgesia (PCA)

Recent changes regarding the use of intravenous opioid therapy by PCA at the Medical Center include Primary Service Prescription of PCAs and APS prescription only by Primary Service request. APS will not routinely prescribe PCAs. Primary Service will order PCAs on form *Primary Care Service Patient Controlled Analgesia (PCA) Physician Orders*. Patients who merit APS consultation include opioid tolerant patients and patients who do exceed the prescription authority of the Primary Service.

**To help APS determine the optimal dose for PCA use, the following should be considered:**

1) Short-acting opioids (fentanyl, sufentanil, remifentanil) should not be routinely used/prescribed at the end of surgery (within the final 30 minutes of the procedure) or in PACU.

2) Long-acting opioids such as methadone should only be administered according to hospital policy (see document *Intraoperative Use of I.V. Methadone*).

3) Intermediate-acting opioids (e.g., morphine, hydromorphone) should be considered for titration towards the end of the procedure (with the final 30 minutes). PACU nursing staff have instructions to load patients with morphine or hydromorphone if APS PCAs are to be used. Loading should be completed within one hour of the patient arriving into PACU from the O.R. Satisfactory completion is loading is considered when the patient reports adequate pain relief or excessive opioid-induced sedation is observed. Following the loading dose, the incremental dose of the PCA will be determined.

4) In most patients, a continuous infusion of opioids will not be administered by PCA at least until it is satisfactorily demonstrated that the patient can tolerate the existing PCA prescription.

### Regional Analgesia by Catheter Infusion

Continuous infusion of peripheral nerves or plexuses require accurate placement of catheters using continuous nerve stimulation with the Arrow Contiplex System. Bolus injection after placement of the catheter with Lidocaine 2% or Ropivacaine 0.5% is recommended. Upon completion of surgery, a continuous infusion with bupivacaine 0.25% at 6 ml/hr is usually recommended. As APS does not currently have a dedicated form for such an infusion, we recommend modifying form *Pain Service – Epidural/Intrathecal Analgesia Physician Orders* for this purpose. Epidural standards for sedation and blood pressure monitoring do not apply.