# Postoperative Pain Management in RCNIC

Date: 9/2007

APPROVAL: _____

## General Statement on Pain in the Neonate

The International Association for the Study of Pain has defined pain as an "unpleasant sensory and emotional experience associated with actual or potential tissue damage or described in terms of such damage". The interpretation of pain is subjective. Obviously, due the neonate's inability to report pain, pain can only be ascertained through the recognition of the infant's associated behavioral and physiologic response to pain.

Armed with the knowledge that pain in the neonate is real, that exposure to prolonged or severe pain may increase morbidity, and that pain can be assessed and treated, the health care providers at RCNIC are committed to the reduction of postoperative pain and stress in the neonate. We want to provide optimal postoperative pain management with minimal risk of adverse event.

## ASSESSMENT OF PAIN

All postoperative patients in RCNIC will be assessed for pain as per CCHMC and RCNIC pain assessment policies.

## POSTOPERATIVE PAIN MANAGEMENT IN RCNIC

- Parents should to be educated pre and/or postoperatively regarding plans for postoperative pain management.
- Exception to these guidelines can be made by physicians or APNs in the event that particular interventions are judged to carry undue risk to the stability of the child.
- Pharmacologic interventions for postoperative pain management require a physician's or APN's order, and should be used in conjunction with non-pharmacologic pain control measures.
- Before administering any medication, the Physician/APN/Nurse should familiarize herself/himself with the recommended medications, doses, restrictions, adverse drug reactions and treatment regimens for adverse events. All health care providers in the unit should be familiar with the pain management guideline as a whole before using any part of the guideline.
- Postoperative pain control may be managed by either continuous narcotic or scheduled intermittent narcotics. The decision should be based on the type of operative procedure performed and the general condition of the patient.

- Morphine is the recommended first line narcotic to use for postoperative pain management in RCNIC.

- Recommended doses for morphine in opiate-naïve infants, or infants without prolonged exposure to opiates:

  Continuous infusion of morphine: Initially the morphine should be started at 0.05 mg/kg/hour. Morphine infusions should then be increased or decreased as needed for appropriated pain management based on ongoing pain assessment.

  Intermittent doses of morphine: Initially doses should be 0.05 mg/kg every 2-3 hours. Doses or dosing intervals should then be changed as needed for appropriated pain management based on ongoing pain assessment

- Previous patient exposure to opiates will be factored into the dosing of pain medication to account for potential physiologic tolerance.

## PROCEDURES AND PAIN MANAGEMENT

Procedures for which continuous narcotic infusions are recommended for at least 24 to 48 hours:

- Congenital diaphragmatic hernia repair
- Bowel resection
- Nissen/fundoplication (non-laparoscopic)
- Intestinal reanastomosis
- Gastroschisis/Omphalocele (primary repair)
- Cystic hygroma resection
- TEF repair
- PDA ligation
- Pancreatectomy
- Bladder extrophy repair
- Any other procedure requiring thoracotomy
- Any other procedure requiring laparotomy

Procedures for which continuous narcotic OR scheduled intermittent narcotic pain control are recommended:

- Gastroschisis/Omphalocele with silo/suspension/reduction
- Stoma revision
- Patent urachus repair
- Imperforate anus repair with colostomy
- Nissen/fundoplication (laparoscopic)

Procedures for which scheduled intermittent narcotic pain control are recommended:

- VP shunt
- Subgaleal shunt
- Meningomyelocele repair
- Tracheostomy

- Hernia repair
- Imperforate anus repair (anoplasty)
- PEG placement
- GT placement
- Choanal atresia repair

Other procedures not included in above should receive pain management as needed to provide adequate pain control.

## USE OF EPIDURAL CATHETERS FOR PAIN MANAGEMNT IN RCNIC

When epidural catheters are placed in the operating room for intraoperative and/or postoperative pain management the Pain Service will consult on the patient's pain management for at least as long as the epidural catheter is in place. The Pain Service and Primary Care Service will be in contact at least daily to coordinate the patient's pain care.

References:

Batton, D., Barrington, K., & Wallman, C. (2006). Prevention and management of pain in the neonate: an update. *Pediatrics, 118* (5), 2231-41.

Song, S. & Carr, D. (1999). Pain and memory. Retrieved September 28, 2007 from International Association for the study of pain: Pain- Clinical Updates. Website: http://www.iasp-pain.org/AM/Template/cfm?section=Home&section=pain-Clinical-Updates1&template=/CM/ContentDisplay.cfm&contentFileID-205

Breschan, C., Jost, R., Krumpholz, R., etal. (2005.) A prospective study comparing the analgesic efficacy of levobupivacaine, ropivacaine and bupivacaine in pediatric patients undergoing caudal blockade. Pediatric Anesthesia, 15, 301-306.