

USING PREOPERATIVE ORAL ACETAMINOPHEN FOR CHILDREN UNDERGOING MYRINGOTOMY AND TUBE PLACEMENT

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Identification of the problem – Overview: Nurses in an ambulatory surgery center anecdotally noted that children having a myringotomy and tubes procedure were arriving in the PACU crying and inconsolable. Often the parents were unable to console or distract the patient. The nurses questioned if rectal acetaminophen given in the OR as the only analgesia was the best way to treat pain.

EP Question/Purpose: Will oral acetaminophen given pre-operatively instead of rectal acetaminophen given in the operating room improve pain control and emergence delirium in children having myringotomy and tube placement.

Methods/Evidence: Each year, more than half a million ear tube surgeries are performed on children, making it the most common childhood surgery performed with anesthesia. Seventy percent of children undergoing bilateral myringotomy with tube insertion experience pain that needs treatment. Emergence agitation occurs in up to 67% of pediatric patients after anesthesia for bilateral myringotomy tubes. Emergence agitation can be dangerous for the patient; increasing the difficulty of monitoring the vital signs during an important phase of recovery, risk of injury, increasing patient nurse ratios, increase parental distress and anxiety. Causes of emergence agitation are not well understood, and can be exacerbated with pain. Rectal acetaminophen absorption rate varies between 128-268 minutes. Oral acetaminophen plasma levels peak 30 minutes after administration.

After a literature search it was determined administering 10 mg/kg acetaminophen orally at least 30 minutes before the start of the procedure could result in better pain control. Acetaminophen was added to the myringotomy order set in electronic medical record for consistency and convenience. FLACC pain score tool was re-introduced to the nursing staff along with the expectation of properly documenting each patient's pain status. Articles were provided to nurses, anesthesia, and surgeons to support the change.

Significance of Findings/Outcomes: Nurses reported greater understanding of onset time of acetaminophen dosages and using FLACC pain tool. Average FLACC scores improved from 3.7 to 1.9 when giving oral acetaminophen in preop instead of rectal in the operating room.

Implications for perianesthesia nurses and future research: Nurses can impact patient outcomes by questioning current practices and looking for literature to support improved outcomes.