**INTRODUCTION**

Tonsillectomy, a commonly performed operation in children and young adult populations, is associated with significant postoperative morbidity. Pain and odynophagia occurring in the postoperative period can interfere with adequate hydration and return to normal levels of daily function, especially in adults. Traditional post-tonsillectomy management includes narcotic analgesics however, significant postoperative narcotic and acetaminophen requirements with no complications were not demonstrated.

**MATERIALS & METHODS**

- **Study Design:** Randomized, double blind, placebo controlled trial.
- **Methods:** Patients eighteen and older planning to undergo tonsillectomy were recruited through the department of otolaryngology. Participants were randomized to celecoxib versus placebo with a loading dose the night before surgery then twice a day for ten days postoperatively. Subjects were instructed to take the drug with food or milk. Pain, diet, and activity were rated on a Likert scale.
- **Results:** Eighteen patients enrolled. Two could not complete the diaries due to pain. Intraoperative blood loss was similar between treatment groups, and no subject had a peri or postoperative bleeding. Pain, diet, and activity scores were slightly better in the celecoxib group compared to placebo.
- **Conclusions:** In this small cohort, celecoxib reduced postoperative narcotic and acetaminophen requirements with no complications compared to placebo. Informative pain, diet, and activity scores in the celecoxib group were generally better than in the placebo group, but no statistical differences could be demonstrated. The objective of this study was to test the efficacy and safety of celecoxib use for pain relief associated with tonsillectomy compared to placebo in the perioperative setting.

**RESULTS**

Fifteen females and 2 males undergoing tonsillectomy for recurrent or chronic tonsillitis participated in this investigation. Ages ranged from 19 to 32 years with an average of 25.8 years. All subjects preoperative complete blood counts, prothrombin/INR and partial thromboplastin times were within normal ranges. Tonsillectomy technique was fairly evenly split between bipolar cautery (9 subjects) and monopolar cautery (8 subjects). Nine were randomized to the active drug and eight to the placebo. Two females in the placebo group were able to take the pre-operative doses of drug but failed to complete the daily journal. This left 6 subjects in the placebo group to analyze postoperative pain, diet, and analgesia outcomes.

There were no drug-related adverse events nor episodes of post-operative bleeding or hospitalization in the active drug cohort. Two subjects in the placebo group returned to the emergency room for intravenous fluid, steroid, and additional narcotic pain medications. One subject in the active drug group required additional narcotic pain medications while 3 in the placebo group required additional prescriptions for narcotic pain medications.

Average blood loss for the group was 25.59 ml with a standard deviation of 39.09. Averages of pain, diet, activity, total acetaminophen equivalent and total narcotic equivalent varied by day (Figures 1-3). All pain scores were generally lower and diet and activity scores higher for subjects in the celecoxib group. However, acetaminophen and narcotic use were higher in the placebo group, and only total acetaminophen and narcotic equivalents were statistically significant by group when analyzed using an ANOVA (Table 1).

**CONCLUSIONS**

- Peri-operative celecoxib reduced acetaminophen and narcotic use in patients undergoing tonsillectomy.
- Subjects taking celecoxib experienced no increased complications including excess bleeding.
- Pain, diet, and activity scores in the celecoxib group were generally better than in the placebo group, but the difference did not reach statistical significance.