Implementation of a Standardized Pain Management Protocol Reducing the Rate of Postoperative Complications in Children Undergoing a Tonsillectomy

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**Background**
- Over 500,000 tonsillectomies performed annually in the United States
- Pain management for children undergoing a tonsillectomy varies widely among providers, often leading to potentially avoidable postoperative complications (pain, respiratory depression, and bleeding)

**Purpose and Aims**
- To evaluate the efficacy of a standardized pain management protocol in decreasing postoperative pain and respiratory complications among children undergoing tonsillectomy.
  - **Aim 1:** Evaluate the impact of a standardized pain management protocol on reducing postoperative pain medication administration
  - **Aim 2:** Determine the impact of a standardized pain management protocol on reducing the rate of postoperative respiratory interventions
  - **Aim 3:** Determine the rate of adherence to a standardized pain management protocol
  - **Aim 4:** Assess the usability of a standardized pain management protocol

**Methods**
- **Design:** Pre-post Quasi-Experimental
- **Sample:** Children undergoing tonsillectomy (1-18 years of age) and Anesthesia Providers
- **Sample Size:**
  - Pre-Implementation- 81
  - Post-Implementation-99
  - Usability- Anesthesia Providers-8
- **Data Collection:**
  - Medical chart review for no. of pain medication doses and respiratory interventions (Pre)
  - Qualtrics survey for no. of pain medications and protocol usability (post)
- **Data Analysis:** Descriptive Statistics and Chi-square tests

**Intervention**
**Pain Management protocol for Children Undergoing a Tonsillectomy**

**Preoperative:**
- Patient will receive Acetaminophen (15 mg/kg) p.r.o.i. to the preoperative area (IV is acceptable, dose must be within 1 hour of procedure).

**Intraoperative:**
1. 0.01mg/kg to a max of 10mg of Dexamethasone.
2. 0.3–0.5 mg/kg of Desmeltoline and 1 mg/kg Lidocaine on induction.
3. 0.01–0.05 mg/kg of Morphine and an additional 0.3–0.5 mg/kg of Desmeltoline in return of spontaneous ventilation.
4. 0.3–0.5 mg/kg of Morphine and an additional 0.3–0.5 mg/kg of Desmeltoline prior to leaving the operating room (this can be based on respiratory rate, heart rate, and history of OSA).

**Postoperative:**
Postoperative order per your usual preference.

**Results and Discussion**

**Clinical Impacts**
- The use of a standardized pain management protocol significantly
  - Decreased the number of pain medication doses per child (P<.001)
  - Decreased the number of respiratory interventions per child (P=.008)
- There was a 100% adherence rate in using the protocol
- The providers gave the protocol a 4.75/5.00 score for usability

**Conclusion**
- When anesthesia care is guided by a standardized pain management protocol, it can help reduce the number of pain medications and respiratory interventions required.

**References**