

WEIGHT-BASED RISK FOR PROLONGED POST-TONSILLECTOMY PAIN IN CHILDREN: A RETROSPECTIVE STUDY

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Introduction: Tonsillectomy, one of the most painful of pediatric surgeries, is performed in more than 0.5 million children each year in the United States. The estimated yearly number of obese or overweight (OB/OW) children who undergo tonsillectomy or adenotonsillectomy (T&A) approaches 200,000. Theoretically, OB/OW children could be at risk for longer episodes of uncontrolled post-tonsillectomy pain (PTP) in the Post anesthesia care unit (PACU) due to underlying genetic and physiological processes. PACU nurses provide PTP management for OB/OW children after surgery without clear guidelines to manage weight-based differences in PTP management related to OB/OW status.

Identification of the problem: It is unknown if OB/OW children are at risk for prolonged PTP in the PACU.

Purpose of the Study: The purpose of this study was to examine risk for uncontrolled PTP episodes in OB/OW children compared to non-OB/OW children.

Methodology: A retrospective correlational cohort study design was used. Data was obtained from electronic health records of 180 children who had T&A or tonsillectomy from April 2016 – July 2016 at a pediatric medical center in north Texas. Kaplan-Meier survival analysis was performed to determine risk for longer episodes of uncontrolled moderate-to-severe PTP. An episode of uncontrolled pain was considered the time from a pain score ≥ 4 until the pain was reduced and sustained ≤ 4 for at least 30 minutes.

Results: Kaplan-Meier survival analysis indicated that OB/OW children were significantly more likely to have longer episodes of uncontrolled PTP in the PACU ($\chi^2 (1) = 8.353, p = .004$).

Discussion: OB/OW children undergoing T&A are at risk of uncontrolled PTP. Multiple factors may influence PACU nurses' decisions about PTP management practices in OB/OW children, such as fear of airway obstruction and lack of knowledge about weight-based differences in drug metabolism.

Conclusion: This study demonstrated that OB/OW children are at risk for longer episodes of uncontrolled PTP.

Implications for perianesthesia nurses and future research: PACU nurses have an opportunity to drive improvements in clinical practice, education, and research to lower risk for PTP in OB/OW children. Further research is needed to develop clinical practice guidelines for PTP management in OB/OW children.