TEMPORAL ARTERY THERMOMETRY USE IN PEDIATRIC PATIENTS IN THE POST-ANESTHESIA CARE UNIT

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Identification of the Problem: Measuring body temperature is an important part of pediatric post-operative assessment. Current practice of obtaining tympanic/axillary measurements, are sometimes disturbing to a patient who otherwise should not be stimulated during post-operative recovery.

EBP Question/Purpose: Will the use of temporal artery thermometers (TAT) produce accurate temperature readings while decreasing patient stimulation? Two nurses enrolled in an evidence-based practice internship sought to answer this question. The purpose of this project was to determine if TAT would be an accurate method of obtaining temperature measurement during the recovery period.

Methods/Evidence: A literature search was performed using CINAHL, Medline and Cochrane databases with the search terms temperature, thermometers, pediatric and post-operative care. The search yielded 28 articles; five articles were chosen for final analysis. These five were selected because TAT was included in the study. The literature, recommendations and guidelines that were reviewed suggested that less stimulation during the immediate post-operative period contributes to improved recovery and that the TAT supports less stimulation than axillary and tympanic temperature measurements. One study comparing rectal, tympanic and temporal artery temperatures in 304 infants <1 year old found that temporal artery thermometers were more accurate than tympanic and better tolerated than rectal measurements in infants.

Significance of Findings/Outcomes: Research suggests that TATs have comparable accuracy to tympanic and axillary thermometers and are less stimulating than tympanic thermometers. There was no literature comparing accuracy of TAT vs. tympanic temperatures in the immediate post-operative period when patients tend to be hypothermic. Literature review findings were presented to PACU staff and leadership in Powerpoint and poster presentations. A practice change was implemented in the PACU and preoperative area to use TAT for measuring temperature.

Implications for perianesthesia nurses and future research: A research team has been formed to compare TATs with tympanic thermometers for accuracy and level of patient stimulation with use. This team will work with a nurse scientist to develop and perform a study in the PACU at Children’s Hospital Boston evaluating temperature accuracy and stimulation level between the two methods.