Aromatherapy Use for Post-Operative Nausea and Vomiting (PONV) in the Pediatric PACU

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Purpose: To determine if evidence supports the use of aromatherapy in pediatric patients for decreasing post-operative nausea and/or vomiting (PONV), patient distress, the amount of anti-emetic medication administered, and the length of stay in PACU.

Synthesis of Evidence: PONV is a significant complication that affects about 30% of adult surgical patients, with a rate that may be higher for children. PONV is a source of emotional distress, with patients reporting more anxiety about PONV than about post-operative pain. PONV poses a financial burden due to the costliness of a prolonged PACU stay, anti-emetic medication, and unexpected hospital admission. Pharmacological treatments subject patients to potential side effects. Negative physical effects of PONV include trauma to the surgical site. In addition, the pediatric population is particularly vulnerable to dehydration and to the electrolyte and acid-base imbalances that are consequences of PONV.

Proposed Change in Practice: To offer aromatherapy as an adjunct or alternative therapy to anti-emetics in the PACU at Seattle Children’s. Aromatherapy is an inexpensive, non-pharmaceutical, and potentially safe treatment option for PONV.

Implementing Strategies: A literature search found evidence that the use of aromatherapy does decrease PONV, the amount of anti-emetic medication administered, and the length of stay in PACU. Studies identified the following essential oils as best suited for treating PONV (as either individual oils or as a blend): ginger, spearmint, peppermint, and cardamom. In addition, modest evidence exists for treating anxiety: Emotional benefits of aromatherapy may ameliorate the distress patients experience with PONV. Essential oils indicated for treating anxiety include lavender, sweet marjoram, and rose. Numerous studies found a decrease in PONV, anti-emetic use, and length of PACU stay with QueaseEase, a proprietary blend containing essential oils indicated for both PONV and anxiety: Spearmint, peppermint, ginger, and lavender. Limited evidence does exist for its effectiveness for PONV in the pediatric population.

Evaluation: Though the evidence is promising, research on the use of aromatherapy for PONV is in its early stages, especially for children and for medically complex pediatric populations. Evidence on aromatherapy is sometimes conflicting, and existing studies often have methodological flaws.

Conclusion: The effectiveness and safety of aromatherapy on the medically complex pediatric population at Seattle Children’s is yet to be determined. The next step is to conduct a ranking of the evidence on QueaseEase, since this standardized aromatherapy product is the most commonly used in major pediatric centers. Based on this literature review, the hospital will then decide whether to run an informal pilot, or to conduct a formal research study.

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