Aromatherapy Use for Post-Operative Nausea and Vomiting for Patients Undergoing Same-Day Surgeries

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Abstract

Introduction:

Postoperative nausea and vomiting (PONV) is a major concern for patients having surgery under general anesthesia as it causes subjective distress along with increased complications and delays in discharge from the hospital. Aromatherapy represents a complementary and alternative therapy for the management of PONV.

Purpose:

The objective of this study was to examine the effectiveness of aromatherapy (QueaseEASE®, Soothing Scents, Inc) on postoperative nausea and vomiting in same-day surgery patients.

Methods:

This was a quasi-experimental study without a control group. The experimental group (n=98) received QueaseEASE® essential oil inhalation. The level of postoperative nausea and vomiting was measured using a standard 0-10 scale up to 24 hours after surgery. Nausea severity was measured first at onset of nausea and again 30 minutes after aromatherapy administration. Data was collected via telephone calls within 2-3 days of surgery.

Results:

In total, 27 patients (27.6%) experienced PONV and reported nausea severity scores that showed QueaseEASE® helped to decrease their nausea. Thirty minutes after use, the average improvement in nausea scores was 4.94 ± 2.56 (95% CI 3.98 to 5.91) with an average time to relief of less than 1 minute in 74.1% of patients.

Conclusions:

Aromatherapy was favorably received by most patients and represents an effective treatment option for postoperative nausea.

Introduction

Nausea and vomiting are frequent complications of anesthesia post-operatively. There is an increased prevalence of postoperative nausea and vomiting (PONV) in patients undergoing mastectomies, intra-abdominal, gynecologic, and ear-nose-throat (ENT) surgeries. Many injectable and enteral medications are available for the prevention and treatment of PONV, each with the potential for side effects. Utilization of medications requires a provider order, which has the potential to delay initiation of therapy.

The use of aromatherapy via inhalation for the treatment of PONV has been shown to eliminate nausea in up to 85% of patients. Patients have reported perceived effectiveness and favorable improvement with the use of aromatherapy for post-operative nausea. Aromatherapy products have been shown to be well tolerated with no adverse effects, drug interactions, or contraindications.

The aim of this study is to determine the effectiveness of QueaseEASE® aromatherapy pods in the treatment of PONV in patients undergoing same-day hysterectomies, and intra-abdominal and ear-nose-throat (ENT) surgeries.

Methods and Materials

We distributed 100 QueaseEASE® pods to patients scheduled for same-day mastectomies, hysterectomies, intra-abdominal or ENT surgeries. Informed consent was obtained preoperatively. Up to 24 hours after recovery, patients were instructed to document their episodes of nausea, severity at onset and severity 30 minutes after pod use. The severity of nausea was recorded using a scale (0-10) where zero indicates no nausea and ten indicates unbearable nausea. Use of traditional antiemetic medications was not excluded pursuant to individual provider practice. Data for concomitant antiemetic medication use, smoking status, patient age, sex, BMI, and previous history of PONV or motion sickness was also recorded.

Data was collected in the form of patient phone call interviews 2-3 days after discharge. Team members followed a script asking questions following up about the patient's experience with using QueaseEASE®.

Results

Between February 18, 2019 and April 1, 2019, 98 patients were enrolled from Geisinger Medical Center's Post-Anesthesia Care Unit (PACU) to trial QueaseEASE® as part of their post-operative nausea and vomiting (PONV) experience. Of these 98 patients, 27 patients (27.6%) were lost to follow up. Another 40 patients (40.8%) did not experience any PONV. One patient reported that QueaseEASE® did not improve her PONV at all. Another 3 patients did not report any nausea severity ratings, but expressed that when they did use the product, their nausea severity decreased in less than 5 minutes.

In total, 27 patients (27.6%) experienced PONV and reported nausea severity scores that showed QueaseEASE® helped to decrease their nausea. There were fewer men (22.2%) and more Caucasian (96.3%) patients. The most common surgery was abdominal (59.3%), which consisted of hysterectomies, laparoscopies, cholecystectomies, and hernia repairs. There were 16 patients (59.3%) who had at least one risk factor for PONV, and no patient had all three investigated risk factors.

Of the patients who used the pod, 26 patients (90.0%) used QueaseEASE® as their first-line PONV therapy. Thirty minutes after using QueaseEASE®, the average improvement in nausea scores (on a scale of 1 to 10) was 4.94 ± 2.56 (95% CI 3.98 to 5.91) with an average time to relief of less than 1 minute in 74.1% of patients. Nausea severity was decreased similarly regardless of surgery type.

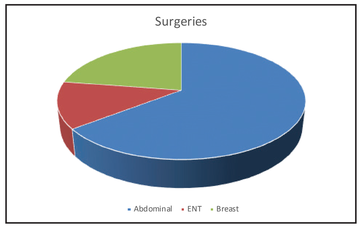

Chart 1. Distribution of surgeries

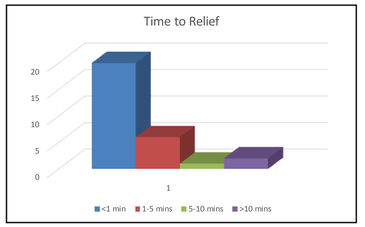

Chart 2. Overall time to relief of PONV

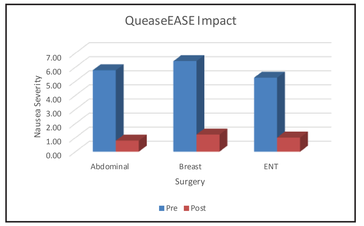

Chart 3. Impact of QueaseEASE® on PONV by surgery

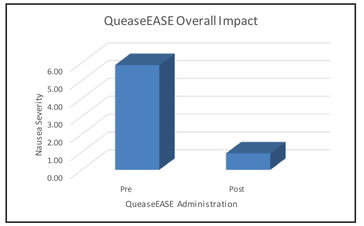

Chart 4. Overall impact of QueaseEASE® on PONV

Discussion

Prior to the initiation of the project, there was evidence that aromatherapy was a viable option in regards to reducing post-operative nausea and vomiting. The project sought out to see if these results could be reproduced amongst same day surgery candidates. The results produced were promising, but had limitations. Previous projects indicated that decreases in nausea after administration of aromatherapy greater than or equal to 5 units were significant. Our average decrease in nausea was as a 4.94 ± 2.56. The value is within parameters of significant improvement when the upper limits of standard deviation are included, however, there are still areas where the project could be improved. The project had limitations associated with the time parameters of the study and population that was selected. A longer time period to collect data could have lead to better selection of patients that fit a certain risk group that would have been better able assess the effectiveness of the pods.

Conclusion

Overall the project supports the aromatic therapy implementation in the setting of same day surgery candidates. However, more data is needed to provide a recommendation for mass distribution. Further analysis, with special considerations in the areas of diversity of surgical procedures are needed.

References

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