Reducing Nausea and Vomiting During Cesarean Section with Regional Anesthesia: Is the Application of Scopolamine Patch with or without Intra-operative Acupressure Point P6 Stimulation more effective than Intra-operative Acupressure Point P6 Stimulation alone

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Introduction:

Obstetric patients who receive regional anesthesia for elective cesarean section frequently experience intraoperative nausea and vomiting. These side effects can be extremely distressing for the parturient and her family. In addition, intraoperative vomiting causes significant challenges for the obstetrician[1], such as increased risk of bleeding, gastric content aspiration, and potential surgical trauma[2]. According to Lussos et al.[3], 80% of parturients at their institution who received spinal anesthesia for cesarean section experienced nausea and vomiting unless they were pretreated with pharmacologic antiemetics. Prophylactic therapy with antiemetic agents can carry multiple adverse effects to the mother and baby. These medications are also expensive and frequently subject to nationwide shortages. Our previous clinical trial showed that acupressure point p6 stimulation is an effective and safe nonpharmacological antiemetic. Out of the available pharmacological antiemetics, transdermal scopolamine patch is one of the safest medications as it cannot be transferred to the baby via breastmilk or placenta.

Objective: The goal of our prospective randomized clinical trial was to compare the effectiveness of reducing intra-cesarean section nausea and vomiting with regional anesthesia in subjects who receive the transdermal scopolamine patch versus those that received acupressure point P6 stimulation versus those that received both the transdermal scopolamine patch and acupressure point P6 stimulation.

Methods: Following IRB approval and informed consent, a total of consecutively recruited patients were randomly allocated into three groups: Group I (n=32) scopolamine patch on the skin behind the right ear, Group II (n=32) acupressure point p6 stimulator at the small depression of the volar surface of the distal right forearm just above the crest of the wrist, or Group III (n=21) application of both the scopolamine patch and acupressure point P6 stimulator, as described above. All three groups received their antiemetic treatment at least an hour before surgery and continued receiving it throughout the surgery.

Results: We are still actively enrolling patients into our study. Our goal is to enroll a total of 240 patients, with 80 patients in each group. However, we would like to present our preliminary data:
The demographic characteristics of the three study groups were similar. Patients experienced more nausea intraoperatively in the scopolamine group (GI = 53.1%) than in the acupressure group (GII = 31.3%, p = 0.08) or the scopolamine plus acupressure group (GIII = 38.1%, p = 0.3), but it was not statistically significant. There was no statistical significant difference between the nausea experienced in GII & III (p = 0.6). There was no statistical significance between the vomiting experienced in all three groups (GI = 31.3% vs GII = 18.8%, p = 0.2; GI vs GIII = 33.3%, p = 0.9; GII vs GIII, p = 0.2). There was no statistically significant difference in the overall anesthetic care satisfaction reported between the three study groups.

Conclusion: All three of our treatment groups experienced less nausea and vomiting than reported in the Lussos et al.[3]™s study. Our data suggests that transdermal scopolamine patch application and acupressure point P6 stimulation are viable therapies for prophylactic antiemetic treatment for caesarean section performed under regional anesthesia. However, we will be able to report more definitive conclusions at the completion of the study.

References:

