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“Reducing hypotension in elective cesarean section patients with administration of ondansetron prior to spinal anesthesia: A retrospective chart analysis”

Abstract
The birth of a child is one of the most memorable moments in a woman’s life, and many women undergo an elective cesarean section, requiring spinal anesthesia. At this time, the patient and the unborn child’s well-being become the anesthetist’s main focus. The ultimate goal of anesthesia providers is to provide the safest care to the patient. Spinal anesthesia has many benefits, but has a common side effect of hypotension, which can also result in nausea. Hypotension, dangerous to mother and child, is often treated with vasopressors, but can also cause nausea, which is treated by the administration of ondansetron. A retrospective chart review (N=114) was performed to examine if the administration of ondansetron prior to spinal anesthesia in elective cesarean section patients reduced the occurrence of hypotension. Inclusion criteria consists of patients receiving spinal anesthesia for elective cesarean sections, ages 20-40 years, ondansetron only given prior to spinal anesthesia, ondansetron given in ten minutes or less before spinal anesthesia and met the American Society of Anesthesiologist’s (ASA) patient status classification I or II. Exclusion criteria includes patients presenting for cesarean section with epidural due to failure to progress, ASA patient status classification III, IV or V, emergent cesarean sections, multiple parities (twins/triplets), > 1,000 ml blood loss, > 6 mg ondansetron administered, patients presenting with a cardiac history (coronary artery disease, myocardial infarction, congestive heart failure, murmur, mitral valve prolapse/regurgitation, dysrhythmias, aortic stenosis/regurgitation) and patients presenting with preeclampsia. A Chi Square test was performed, which indicated no significant association between administering ondansetron and the occurrence of hypotension (df=1, $x^2 (1) = .035, p= .851$). A secondary analysis was performed, which did show a significant association between administering ondansetron and the reduced usage of vasopressors to increase blood pressure (df=1, $x^2(1) = 6.437, p= .011$). This evidence indicates that though ondansetron did not result in reducing hypotension, it did result in decreasing the amount of vasopressors used to maintain blood pressure, which in turn decreased vasopressor adverse side effects to mother and unborn child.