Early breastfeeding success not affected by epidural pain relief with fentanyl

November 8 2017

Including the opioid fentanyl in the solution used to maintain an epidural during childbirth does not appear to affect the success of breastfeeding six weeks after delivery, according to a study published in *Anesthesiology*, the peer-reviewed medical journal of the American Society of Anesthesiologists (ASA). Previous research has suggested fentanyl might be associated with early termination of breastfeeding.

Fentanyl is generally used as part of an epidural for pain relief during labor and delivery. It is given with a local anesthetic such as bupivacaine. Using fentanyl with a local anesthetic allows the use of lower doses of both drugs, which reduces the rate and severity of side effects, explained study lead author Robert J. McCarthy, Pharm.D., research professor of anesthesiology at Northwestern University Feinberg School of Medicine, Chicago. "Local anesthetics can cause muscle weakness and decrease the mother's blood pressure, which can slow the baby's heart rate," said Dr. McCarthy.

The study included 345 women who were randomly assigned to receive one of three epidural solutions: bupivacaine alone, bupivacaine plus 1 microgram per milliliter (μg/ml) of fentanyl, or bupivacaine plus 2 μg/ml of fentanyl. Both doses of fentanyl included in the study are commonly used during labor. All of the women in the study were more than 38 weeks pregnant, planned to breastfeed, had successfully breastfed a prior infant, and had received an epidural during a past labor.

The study found the frequency of breastfeeding at six weeks was 97

percent in those receiving bupivacaine alone, 98 percent in those receiving the solution with 1 μg/ml of fentanyl, and 94 percent in those receiving the solution with 2 μg/ml of fentanyl.

"We found that when fentanyl is used in moderate amounts in an epidural solution, we did not see any adverse consequences in breastfeeding in women who had planned to breastfeed and had done so successfully before," said Dr. McCarthy.

The concern about fentanyl centers on the possibility that fentanyl might transfer from mother to baby through the placenta and depress the nervous system of the infant.

"An infant does not have a liver that is mature enough to process drugs the way adults do," said Dr. McCarthy. "Our study appears to show that this does not occur at doses commonly given during labor and delivery."

The findings are important because breastfeeding has been shown to have many health benefits for both babies and mothers. Children who are breastfed have improved immunity and mothers who breastfeed have a lower incidence of breast and ovarian cancers and diabetes. "As medical practitioners, it is important to ensure our anesthetic interventions do not impede the mother's or infant's ability to breastfeed," the authors wrote.

In an accompanying editorial, David H. Chestnut, M.D., of Vanderbilt University Medical Center in Nashville, Tennessee, stated the current study provides further support of a favorable risk/benefit ratio for the addition of fentanyl to the solution used to maintain a labor epidural. He also added physician anesthesiologists' encouragement of breastfeeding positively intersects with postpartum analgesia and enhanced-recovery-after-delivery protocols, as well as strategies to reduce postpartum opioid use before and after hospital discharge. However, Chestnut wrote that

some important questions remain unanswered, including the impact much larger doses of fentanyl during prolonged labor in women who have not previously given birth and have no history of successful breastfeeding might have.

Provided by American Society of Anesthesiologists

Citation: Early breastfeeding success not affected by epidural pain relief with fentanyl (2017, November 8) retrieved 25 April 2024 from https://medicalxpress.com/news/2017-11-early-breastfeeding-success-affected-epidural.html

This document is subject to copyright. Apart from any fair dealing for the purpose of private study or research, no part may be reproduced without the written permission. The content is provided for information purposes only.