Controversies in Breastfeeding Success: The Role of Epidural Analgesia and Epidural Fentanyl, A Meta-Analysis

Abstract Type: Meta Analysis/Review of the Literature
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Introduction: The impact of epidural labor analgesia on breastfeeding success is controversial, as is the effect of epidural fentanyl on breastfeeding outcomes. We conducted a meta-analysis to further investigate this issue.

Methods: A systematic search of the published literature was performed to identify randomized controlled trials and cohort studies that compared breastfeeding outcomes using epidural versus no epidural analgesia and studies that compared epidural fentanyl versus local anesthetic only epidural analgesia. PubMed, EMBASE, and the Cochrane Central Register of Controlled Trials were searched using the following subject headings: epidural, epidural analgesia, and breastfeeding. The reference lists for all selected articles were reviewed to retrieve additional articles not identified in the original search until repetitive searching of these lists identified no further articles. Only articles published in peer-reviewed journals were included. Relevant data were abstracted from accepted articles. Due to the varying duration of follow-up in all of the studies, long-term breastfeeding was defined as breastfeeding at six or more weeks' duration. Patients who did not receive any analgesia or patients who received only intravenous narcotics were combined into a no epidural group. Odds ratios were calculated for each outcome that was reported in at least two trials using a random-effects model (epidural versus no epidural analgesia and epidural fentanyl versus no epidural fentanyl). Heterogeneity was assessed using the I^2 statistic. The meta-analyses were performed using Comprehensive Meta-Analysis 2 software (Biostat Inc., Englewood, NJ). All tests were two-tailed and a P<0.05 was considered significant.

Results: A total of 4 studies (total n = ) met the inclusion criteria. There was no difference between the epidural and no epidural groups with respect to long-term breastfeeding (OR 1.37, 95% CI 0.69-2.72). Similarly, there was no difference between the epidural fentanyl and no epidural fentanyl groups (P=0.39) (Figure). There was no significant heterogeneity between the studies (I^2=0 for both outcomes).

Discussion: We did not find an effect of epidural analgesia or epidural fentanyl on success of breastfeeding in either analysis. Limitations of this study include the limited number of studies that met inclusion criteria as well as the different durations of follow-up after delivery. Further research in this area is warranted.