American Society of Anesthesiologists™

Statement on Resuming Breastfeeding after Anesthesia

Committee of Origin: Obstetric Anesthesia

(Approved by the ASA House of Delegates on October 23, 2019)

The American Society of Anesthesiologists (ASA) offers this statement to provide anesthesiologists with evidence based information so they may appropriately counsel nursing mothers undergoing surgery who are concerned about adverse neonatal effects from medication exposure via breastmilk. The committee reviewed existing guidelines and reviews on the concentration of anesthetic drugs in breast milk to produce the overview and recommendations included in this statement.[1-6]

Background:
In the past it was recommended that women discard breastmilk ("pump and dump") immediately after surgery before resuming breastfeeding. This outdated recommendation was made before data was available on the accumulation of drugs in breastmilk yet is still widely circulated on the internet, creating considerable confusion among patients and providers. Although many lactating patients presenting for surgical procedures are prepared to pump and dump, patients routinely ask their anesthesiologist for information and recommendations on when they may safely resume breastfeeding.

Anesthesia Drugs and Breastmilk:
A commonly accepted method used to express neonatal drug exposure is the relative infant dose (RID).[7] The RID provides an indication of relative neonatal exposure by taking into account maternal and infant weight as well as the concentration of drug in breastmilk and indicates the percentage of drug in the baby relative to mother. RID levels less than 10% are generally considered safe. While certain opioids (i.e., codeine and tramadol) and drug classes (i.e., amphetamines, chemotherapy agents, ergotamines and statins) are not recommended in breastfeeding mothers, nearly all anesthetic drugs have RID values significantly less than 10% (see Table). An exception is morphine, which has an RID of approximately 9%. Even so, countless women who are breastfeeding have received morphine following surgical procedures without incident. Despite an excellent safety record it makes sense to attempt to reduce narcotic requirements in lactating women by using a multimodal approach to treat postoperative pain.[8] Further, because pain interferes with successful breastfeeding, women should not avoid pain medicines after surgery when needed. The FDA advises that breastfeeding mothers not receive codeine or tramadol, both of which are metabolized by CP3D6. Due to pharmacogenetic variability, there is a risk of neonatal opioid overdose if an "ultra-metabolizer" mother breastfeeds a "slow metabolizer" neonate [9].

Recommendations:
The following recommendations are suggested for lactating women requiring surgery:

1. All anesthetic and analgesic drugs transfer to breastmilk; however, only small amounts are present and in very low concentrations considered clinically insignificant.

2. Narcotics and/or their metabolites may transfer in slightly higher levels into breastmilk; therefore, steps should be taken to lower narcotic requirements by adding other analgesics when appropriate and avoiding drugs that are more likely to transfer (i.e., have a higher RID).
3. Because pain interferes with successful breastfeeding, women should not avoid pain medicines after surgery. Despite an excellent safety record, breastfeeding women who require narcotic pain medicines should always watch the baby closely for signs of sedation: difficult to wake and/or slowed breathing.
4. When possible, spinal or epidural anesthesia consisting of local anesthetic and a long-acting narcotic, should be used for cesarean delivery to reduce overall post-operative pain medication requirements.
5. Patients should resume breastfeeding as soon as possible after surgery because anesthetic drugs appear in such low levels in breastmilk. It is not recommended that patients "pump and dump."

References:

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3. Chantry CJ, Eglash A, Labbok M. ABM position on breastfeeding. Breastfeeding Medicine 2015; 10: 407-11.
4. Dalal PG, Bosak J, Berlin C. Safety of the breast-feeding infant after maternal anesthesia. Pediatric Anesthesia 2014; 24: 359-71.
5. LactMed. TOXNET Toxicology Data Network. US National Library of Medicine. NIH. HMS. Bethesda, MD. Accessed at: https://toxnet.nlm.nih.gov/cgi-bin/sis/search2.
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7. Ilett KF, Kristensen JH. Drug use and breastfeeding. Expert Opin Drug Saf 2005; 4: 745-68.
8. Sutton CD, Carvalho B. Optimal pain management after cesarean delivery. Anesthesiol Clin 2017; 35: 107-24.
9. FDA Drug Safety Communication: FDA restricts use of prescription codeine pain and cough medicines and tramadol pain medicines in children; recommends against use in breastfeeding women. 2018. Accessed at: https://www.fda.gov/Drugs/DrugSafety/ucm549679.htm.

Table. Relative Infant Dose (RID) of Anesthesia Medications and Recommendations

Medication Class (Drug)	Mean RID (%)*
Anticholinergics (atropine, glycopyrrolate)	Unknown: generally considered safe with single systemic or ophthalmic dosing
Anticholinesterases (neostigmine, pyridostigmine)	0.1
Antiemetics (metoclopramide, ondansetron)	Unknown: considered safe due to lack of sedating side effects
Benzodiazepines (diazepam, lorazepam, midazolam)	0.3
Intravenous Anesthetics	
Etomidate	0.1
Ketamine	Unknown: recommended only if medically necessary
Propofol	0.1
Local Anesthetics (bupivacaine, lidocaine, ropivacaine)	0.1
Narcotics	
Fentanyl	1
Hydrocodone	3
Hydromorphone	3
Morphine	9
Oxycodone	3 (maximum daily dose 30mg§)
Remifentanil	Unknown: considered safe secondary to short half-life
Codeine/Tramadol	Avoid: FDA warning against use in women with a CYP2D6 mutation
Non-narcotic Analgesics	
Acetaminophen	4 (maximum daily dose < 3gm¥)
Ibuprofen	0.5
Ketorolac	0.3
Miscellaneous	
Gabapentin	3
Dexamethasone	Unknown: considered safe (may cause temporary loss of milk secondary to ↓ prolactin levels)
Diphenhydramine	Unknown: generally considered safe
Volatile Gases	Unknown: considered safe secondary to rapid excretion, poor bioavailability and OR scavenging of gases

* Mean RID is an estimated average from multiple sources reviewed.

§ LactMed. Toxicology Data Network. US National Library of Medicine. NIH. HMS. Bethesda, MD. Accessed at: https://toxnet.nlm.nih.gov/cgi-bin/sis/search2.

¥ FDA Announcement 468, 2012. Accessed at: https://www.medicaid.nv.gov/Downloads/provider/web_announcement_468_20120425.pdf.