

Ativan, Valium and Dilaudid in breastfeeding

The safety, drug accumulation in breastmilk, and adverse effects in the acute management of anxiety and pain.

The benzodiazepines, lorazepam and diazepam are excreted in breast milk. The extent of lorazepam excretion in breast milk has been found to be subtherapeutic. A study published in the British Journal of Pharmacology reviewed 51 women who received lorazepam prior to delivery to manage hypertension. The dose of lorazepam among patients who had their breast milk sampled was 2.5mg by mouth twice daily for 5 days after delivery. The concentration of lorazepam on day 5 in breast milk was 12ug/L of free lorazepam and 35ug/L of conjugated lorazepam. Assuming the infants were receiving 200mL/kg/day of breast milk, this would correspond to ingestion of 2.6ug/kg/day of free lorazepam, and 9.6ug/kg/day of conjugated lorazepam. Therapeutic dosing of lorazepam is 28ug/kg/day, much higher than the maximum theoretical dose of lorazepam in breast milk. The infants did not show any signs of respiratory depression or sedative effects.¹

In contrast to lorazepam, diazepam has a much longer half life. No adverse effects have been reported in breastfeeding infants with a single dose of 10mg/day.¹

In a study published in the Journal of Clinical Pharmacology, diazepam levels were monitored in 9 women at least one month postpartum receiving surgical sterilization. None of the women received any narcotic medications following surgery. Breast milk samples were collected at three intervals after the surgical period: one in the recovery room prior to discharge, and the other two sets were collected on post operative day one at home. Breast milk samples were collected by electronic pump from a single breast, collecting between 10 and 20mL for testing by gas chromatography. In all 9 cases, diazepam was undetectable with a threshold of 150ng/mL. This level of breast milk excretion seems to be clinically insignificant. This study suggested that single doses of diazepam of 10mg or less do not pose a significant pharmacodynamic effect.²

Lactmed indicates that lorazepam has low levels in breastmilk and does not cause adverse effects with usual maternal dosages. Additionally, Lactmed states that diazepam is safe to use cautiously during breastfeeding. After a single dose, there is generally no need to wait to resume breastfeeding; however, it may be advisable to wait 6 to 8 hours in a newborn or premature infant. Again, the infant should be monitored for sedation, poor feeding, and poor weight gain.³

Dilaudid use in breastfeeding

Evidence regarding the use of hydromorphone during breastfeeding is limited by sample size. One study conducted at the University of Kentucky evaluated hydromorphone exposure in 8 non-smoking women between the ages of 24-32. Hydromorphone 2mg was given intranasally as a one time dose. Breast milk samples were collected at 2 hour intervals until 14 hours, then collected again after 24 hours. The maternal to infant dose ratio was 0.67. In clinical context, a 60kg mother receiving hydromorphone 4mg every 6 hours would provide 0.002mg/kg/day to a 5 kg infant assuming 100% bioavailability. The recommended neonatal dose of hydromorphone is 0.03mg/kg every 3-4 hours. This exposure from breast milk would seem to be clinically insignificant in the context of short term use of hydromorphone. This study was limited by the fact that the hydromorphone was only given intranasally. More data is needed to determine the pharmacokinetic effects of higher doses and long term use. A larger study in 2009 of 30 postpartum mothers receiving both hydrocodone and hydromorphone while breastfeeding confirmed the safety of postpartum dosing to manage pain. When combining hydrocodone and hydromorphone, the median opioid dose was 0.7% of a therapeutic dose for older infants.⁴⁻⁶

Lactmed indicates that hydromorphone use should be limited to 2 to 3 days using low dosages in breastfeeding mothers.⁴ Overall, the risk of infant respiratory depression and sedation effects are low, and short term use of hydromorphone may be safe.

Conclusion/ Recommendations

Studies suggest that infant exposure to Valium, Ativan and Dilaudid through breast milk is low and may be clinically insignificant after short term use. However, due to small sample sizes and wide variation in maternal breast milk product and drug secretion, actual risk remains unclear. Based on recommendations from the American Academy of Pediatrics, LactMed, and primary literature review, low to standard dosing of these agents with appropriate infant monitoring while breastfeeding appears safe.

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