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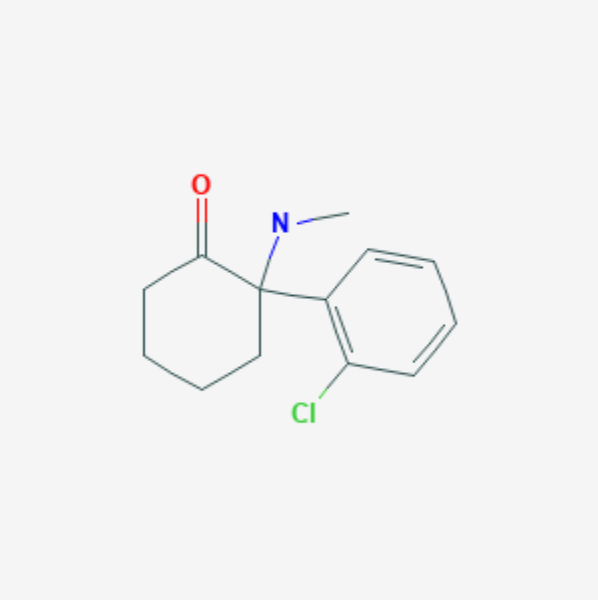
NLM Citation: Drugs and Lactation Database (LactMed) [Internet]. Bethesda (MD): National Library of Medicine (US); 2006-. Ketamine. [Updated 2019 Apr 1].
Bookshelf URL: https://www.ncbi.nlm.nih.gov/books/

Ketamine

Revised: April 1, 2019.

CASRN: 6740-88-1



Drug Levels and Effects

Summary of Use during Lactation

Breastmilk levels of ketamine have not been measured after administration to humans. Minimal data indicated that ketamine use in nursing mothers may not affect the breastfed infant or lactation. Until more data are available, ketamine should only be used with careful monitoring during breastfeeding. Alternate agents are preferred.

Drug Levels

Maternal Levels. Relevant published information was not found as of the revision date.

Infant Levels. Relevant published information was not found as of the revision date.

Effects in Breastfed Infants

Four mothers who received epidural analgesia with lidocaine and bupivacaine for cesarean section also received general anesthesia with ketamine and midazolam (dosages not specified). Their infants were either breastfed or received their mother's breastmilk by bottle. No adverse effects were reported in the infants.[1]

Effects on Lactation and Breastmilk

A pregnant woman sustained 28% body surface area burns near term. She underwent an emergency cesarean section on her due date under ketamine anesthesia. Although the infant required vigorous resuscitation, the infant began breastfeeding immediately. The infant had transient jaundice that resolved in a few days.[2]

A study compared women undergoing cesarean section who received either placebo or S-ketamine (esketamine) 0.5 mg/kg intramuscularly, followed by a continuous infusion of 2 mcg/kg/minute for 12 hours. This low dose was used to enhance analgesia and reduce residual pain rather than to provide anesthesia. All women received intraspinal bupivacaine 8 to10 mg and sufentanil 5 mcg for analgesia, as well as midazolam 0.02 mg/kg intravenously before the S-ketamine or placebo injection. Postoperatively, patients received patient-controlled intravenous morphine for 24 hours, followed by acetaminophen, oral ketorolac and a single dose of ondansetron 8 mg intravenously as needed. Of the 56 patients enrolled in the study (28 in each group), 13 in each group were contacted at 3 years postpartum. Patients who received placebo reported breastfeeding for an average of 10.5 months and those who received S-ketamine reported breastfeeding for an average of 8 months; however, the difference was not statistically significant.[3]

A randomized, double-blind study compared the effects of intravenous propofol 0.25 mg/kg, ketamine 0.25 mg/kg, ketamine 25 mg plus propofol 25 mg, and saline placebo for pain control in mothers post-cesarean section. A single dose was given immediately after clamping of the umbilical cord. The time to the first breastfeeding was 58 minutes in those who received placebo, 31.9 minutes with ketamine and 25.8 minutes with propofol plus ketamine. The time was significantly shorter than the other groups with the combination.[4]

Alternate Drugs to Consider

Dexmedetomidine, Etomidate, Methohexital, Propofol, Thiopental

References

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3. Suppa E, Valente A, Catarci S et al. A study of low-dose S-ketamine infusion as "preventive" pain treatment for cesarean section with spinal anesthesia: benefits and side effects. Minerva Anestesiol. 2012;78:774-81. PubMed PMID: 22374377.
4. Jaafarpour M, Vasigh A, Khajavikhan J et al. Effect of ketofol on pain and complication after Caesarean delivery under spinal anaesthesia: A randomized double-blind clinical trial. J Clin Diagn Res. 2017;11:UC04-UC07. PubMed PMID: 28511482.

Substance Identification

Substance Name

Ketamine

CAS Registry Number

6740-88-1

Drug Class

Breast Feeding

Lactation

Anesthetics, Intravenous

Hypnotics and Sedatives

Anesthetics, Dissociative

Excitatory Amino Acid Antagonists;