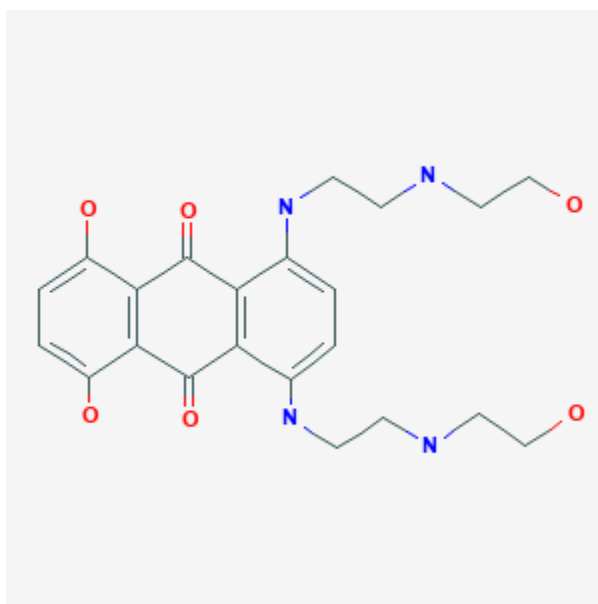




Mitoxantrone

Revised: October 31, 2018.

CASRN: 65271-80-9



Drug Levels and Effects

Summary of Use during Lactation

Most sources consider breastfeeding to be contraindicated during maternal antineoplastic drug therapy, such as mitoxantrone.[1][2] It might be possible to breastfeed safely during intermittent therapy with an appropriate period of breastfeeding abstinence, but the duration of abstinence is not clear. In one patient, mitoxantrone was still detectable in milk 28 days after a dose of 6 mg per square meter. Chemotherapy may adversely affect the normal microbiome and chemical makeup of breastmilk.[3] Women who receive chemotherapy during pregnancy are more likely to have difficulty nursing their infant.[4]

Drug Levels

Maternal Levels. A woman treated with mitoxantrone, etoposide and cytarabine for promyelocytic leukemia received 3 daily mitoxantrone doses of 6 mg per square meter intravenously. A mitoxantrone milk level of 120

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mcg/L occurred immediately after the third dose. Milk mitoxantrone level dropped to a plateau value of about 20 mcg/L by 7 days after the third dose and remained at 18 mcg/L at 28 days after the last dose.[3]

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

Effects in Breastfed Infants

One mother received 3 daily doses of 6 mg/sq m of mitoxantrone intravenously along with 5 daily doses of etoposide 80 mg/sq m and cytarabine 170 mg/sq m intravenously. She resumed breastfeeding her infant 3 weeks after the third dose of mitoxantrone at a time when mitoxantrone was still detectable in milk. The infant had no apparent abnormalities at 16 months of age.[3]

Effects on Lactation and Breastmilk

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

Alternate Drugs to Consider

(Multiple Sclerosis) [Glatiramer](#), [Immune Globulin](#), [Interferon Beta](#)

References

1. Pistilli B, Bellettini G, Giovannetti E et al. Chemotherapy, targeted agents, antiemetics and growth-factors in human milk: How should we counsel cancer patients about breastfeeding? *Cancer Treat Rev.* 2013;39:207-11. PubMed PMID: 23199900.
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3. Urbaniak C, McMillan A, Angelini M et al. Effect of chemotherapy on the microbiota and metabolome of human milk, a case report. *Microbiome.* 2014;2:24. PubMed PMID: 25061513.
4. Stopenski S, Aslam A, Zhang X et al. After chemotherapy treatment for maternal cancer during pregnancy, is breastfeeding possible? *Breastfeed Med.* 2017;12:91-7. PubMed PMID: 28170295.
5. Azuno Y, Kaku K, Fujita N et al. Mitoxantrone and etoposide in breast milk. *Am J Hematol.* 1995;48:131-2. Letter. PubMed PMID: 7847330.

Substance Identification

Substance Name

Mitoxantrone

CAS Registry Number

65271-80-9

Drug Class

Breast Feeding

Lactation

Antineoplastic Agents