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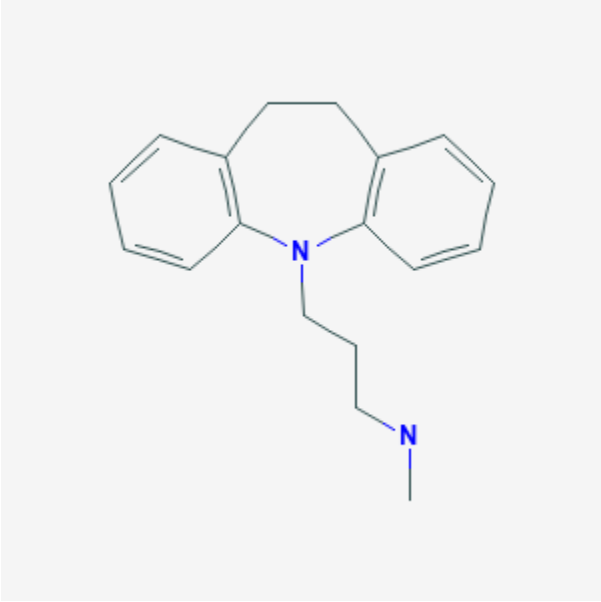
Desipramine

Revised: October 31, 2018.

CASRN: 50-47-5



Drug Levels and Effects

Summary of Use during Lactation

Milk levels of desipramine and its metabolite are low and have not been detected in the serum of breastfed infants. Immediate side effects have not been reported and a limited amount of follow-up has found no adverse effects on infant growth and development. Desipramine use during breastfeeding would usually not be expected to cause any adverse effects in breastfed infants, especially if the infant is older than 2 months.

Drug Levels

Desipramine is metabolized to 2-hydroxydesipramine which has antidepressant activity equal to that of desipramine.[1]

Maternal Levels. A mother who was taking desipramine 300 mg daily had average milk desipramine plus 2-hydroxydesipramine milk levels of 338 mcg/L at 9 hours after the dose 10 to 11 weeks postpartum.[2]

Infant Levels. Two infants whose mothers were taking desipramine during pregnancy and lactation had no detectable serum desipramine (<25 mcg/L) with a maternal dosage of 200 mg daily. One infant was tested at 2.3 and 14.9 weeks of age while breastfeeding 7 to 9 times daily and the other was tested at 5.4 weeks of age while breastfeeding 10 to 12 weeks of age. Two other infants whose mothers began desipramine postpartum had undetectable (<10 mcg/L) serum desipramine levels. One infant whose mother took desipramine 150 mg daily was tested at 12.3 weeks of age while breastfeeding 4 to 6 times daily; the other whose mother took desipramine 37 mg daily was tested at 33 weeks of age while breastfeeding 0 to 3 times daily.[3]

Effects in Breastfed Infants

One infant whose mother took desipramine 100 mg daily for 8 weeks starting at 16 weeks postpartum was followed up at 36 months of age. No adverse effects on growth and development were found.[4]

Effects on Lactation and Breastmilk

Desipramine has caused increased serum prolactin levels in some patients.[5] The clinical relevance of these findings in nursing mothers is not known. The prolactin level in a mother with established lactation may not affect her ability to breastfeed.

An observational study looked at outcomes of 2859 women who took an antidepressant during the 2 years prior to pregnancy. Compared to women who did not take an antidepressant during pregnancy, mothers who took an antidepressant during all 3 trimesters of pregnancy were 37% less likely to be breastfeeding upon hospital discharge. Mothers who took an antidepressant only during the third trimester were 75% less likely to be breastfeeding at discharge. Those who took an antidepressant only during the first and second trimesters did not have a reduced likelihood of breastfeeding at discharge.[6] The antidepressants used by the mothers were not specified.

A retrospective cohort study of hospital electronic medical records from 2001 to 2008 compared women who had been dispensed an antidepressant during late gestation (n = 575) to those who had a psychiatric illness but did not receive an antidepressant (n = 1552) and mothers who did not have a psychiatric diagnosis (n = 30,535). Women who received an antidepressant were 37% less likely to be breastfeeding at discharge than women without a psychiatric diagnosis, but no less likely to be breastfeeding than untreated mothers with a psychiatric diagnosis.[7] None of the mothers were taking desipramine.

Alternate Drugs to Consider

Nortriptyline, Paroxetine, Sertraline

References

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Substance Identification

Substance Name

Desipramine

CAS Registry Number

50-47-5

Drug Class

Breast Feeding

Lactation

Antidepressive Agents

Antidepressive Agents, Tricyclic