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Maraviroc

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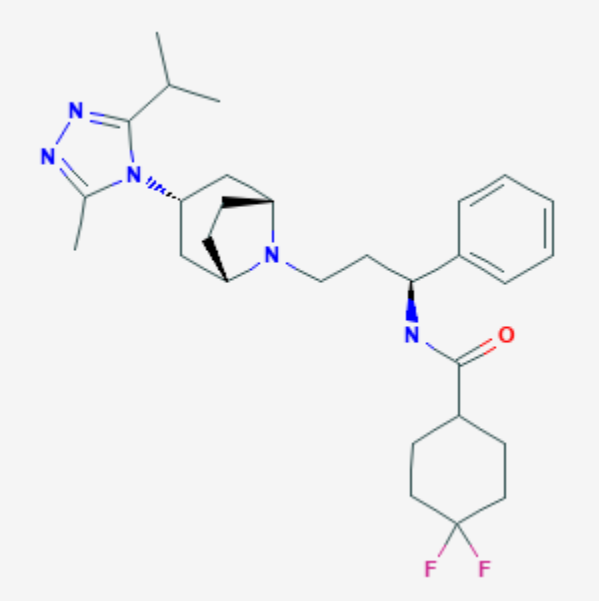
CASRN: 376348-65-1



Drug Levels and Effects

Summary of Use during Lactation

In the United States and other developed countries, HIV-infected mothers should generally not breastfeed their infants. No published information is available on the use of maraviroc during breastfeeding. In countries in which no acceptable, feasible, sustainable and safe replacement feeding is available, World Health Organization guidelines recommend that all women with an HIV infection who are pregnant or breastfeeding should be maintained on antiretroviral therapy for at least the duration of risk for mother-to-child transmission.Mothers should exclusively breastfeed their infants for the first 6 months of life; breastfeeding with complementary feeding should continue through at least 12 months of life up to 24 months of life.[1] The first choice regimen for nursing mothers is tenofovir, efavirenz and either lamivudine or emtricitabine. If these drugs are unavailable, alternative regimens include: 1) zidovudine, lamivudine and efavirenz; 2) zidovudine, lamivudine and

nevirapine; or 3) tenofovir, nevirapine and either lamivudine or emtricitabine. Exclusively breastfed infants should also receive 6 weeks of prophylaxis with nevirapine.[2,3]

Drug Levels

Maternal Levels. A woman with HIV was treated with maraviroc 150 mg twice daily, lamivudine 150 mg twice daily and lopinavir 400 mg plus ritonavir 100 mg twice daily. She exclusively breastfed her infant until 6 months of age, then partially breastfed her infant until 7 months of age. At 5 months postpartum, paired maternal milk and plasma samples were obtained before a dose and at 1, 2, 4, 6, 8, and 12 hours after a dose of maraviroc. A peak milk level of 415 mcg/L occurred 2 hours after the dose. The level was almost as high at 4 hours, and then fell to less than 100 mcg/L at 12 hours after the dose. The average milk concentration was 193 mcg/L, which yields a daily infant dose of 29 mcg/kg of maraviroc. Assuming a maternal weight of 60 kg, this translates to a weight-adjusted infant dosage of 0.6%. [4]

Infant Levels. A woman with HIV was treated with maraviroc 150 mg twice daily, lamivudine 150mg twice daily and lopinavir 400 mg plus ritonavir 100 mg twice daily. At 5.5 months of age, a single plasma sample was obtained (time with respect to dose and nursing not stated) from the infant during exclusive breastfeeding. Maraviroc was undetectable (<2.5 mcg/L) in the infant's plasma.[4]

Effects in Breastfed Infants

A woman with HIV was treated with maraviroc 150 mg twice daily, lamivudine 150mg twice daily and lopinavir 400 mg plus ritonavir 100 mg twice daily. Her infant received zidovudine 4 mg/kg twice daily for 14 days at birth and was exclusively breastfed until 6 months of age, then partially breastfed until 7 months of age. Clinical and laboratory assessment at 2, 4, and 8 weeks, and 3, 6, 9, and 12 months after birth showed normal development. Full blood cell count, renal, and liver parameters remained within normal range. HIV-DNA PCR results were consistently negative, and at 12 months of age, an HIV antibody test was negative.[4]

Effects on Lactation and Breastmilk

Some case reports have suggested that antiretrovirals, including lamivudine, might cause hyperprolactinemia and galactorrhea in some patients,[5] although this has been disputed.[6] The prolactin level in a mother with established lactation may not affect her ability to breastfeed.

References

1. Anon. Guideline: Updates on HIV and infant feeding: The duration of breastfeeding, and support from health services to improve feeding practices among mothers living with HIV. Geneva: World Health Organization 2016. PMID: 27583316
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Substance Identification

Substance Name

Maraviroc

CAS Registry Number

376348-65-1

Drug Class

Breast Feeding

Lactation

Anti-Infective Agents

Anti-HIV Agents

Antiviral Agents

Anti-Retroviral Agents

HIV Fusion Inhibitors