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Bromocriptine

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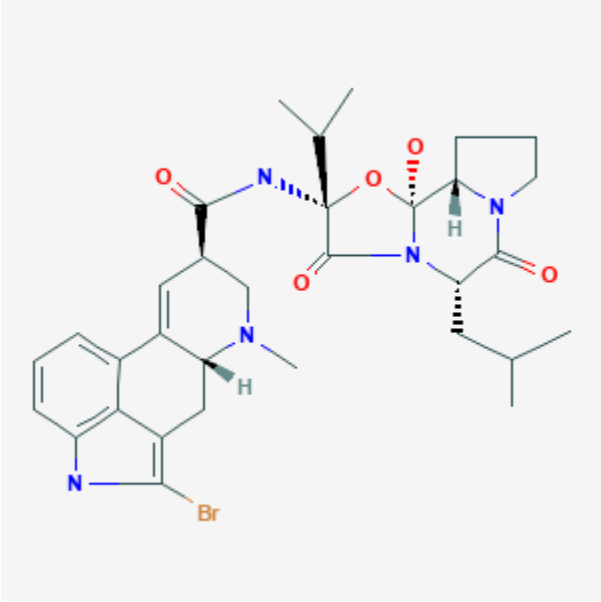
CASRN: 25614-03-3



Drug Levels and Effects

Summary of Use during Lactation

Bromocriptine is usually not used during breastfeeding because it suppresses lactation. The indication of lactation suppression has been withdrawn in the U.S. and discouraged in other countries because it increases the risk of maternal stroke, seizures, cardiovascular disorders, death and possibly psychosis.[1][2][3][4] A low dose of 2.5 mg once daily has been used for 3 days to decrease overproduction of milk. The drug was undetectable in milk with this dosage and infants had no adverse reactions, but the safety of this use is not established.

Case reports and series also exist of mothers treated with bromocriptine for amenorrhea-galactorrhea syndrome or prolactinoma during pregnancy and lactation who successfully breastfed their infants. Bromocriptine has been used to treat persistent galactorrhea following breast augmentation surgery.[5]

Drug Levels

Maternal Levels. In 14 women given bromocriptine 2.5 mg once daily, the drug was undetectable (<0.2 mcg/L) in breastmilk on consecutive 3 days, but the times with respect to the doses were not stated.[6]

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

Effects in Breastfed Infants

No adverse effects were noticed in 14 breastfed infants of mothers who were given oral bromocriptine 2.5 mg once daily for 3 days beginning on day 5 postpartum to decrease overproduction of milk.[6]

In a case series of 40 women with pituitary adenoma and hyperprolactinemia, 30 of the women took bromocriptine 2.5 or 5 mg daily during pregnancy. Thirty of the 40 women breastfed their infants, although it is not clear from the paper how many of the mothers continued to take bromocriptine during nursing. The authors reported that there were no abnormal findings in any of the breastfed infants. In an unstated number of infants who had their serum prolactin measured, it took 6 to 9 weeks for their elevated serum prolactin levels to return to baseline values.[7]

A mother who was receiving bromocriptine (dosage not stated) for hyperprolactinemia from a pituitary macroadenoma breastfed her infant partially for 2 days and then exclusively from the third day onward (duration not sated). The infant had no observable side effects. She had regained her birthweight on day 10 and had gained weight adequately at 5 months.[8]

Effects on Lactation and Breastmilk

With doses of 2.5 mg 1 to 3 times daily (usually twice daily), there is a marked reduction in serum prolactin, no increase in serum prolactin following nipple stimulation and little or no breast engorgement. Treatment is usually given for 14 days. A meta-analysis of published studies found evidence that bromocriptine is more effective than placebo for lactation suppression during the first week postpartum, but evidence is insufficient to comment on the acceptability of such therapy.[9] Rebound lactation after cessation of therapy may be controlled with a dose of 2.5 mg once daily for 1 additional week.[10]

Bromocriptine also prevents puerperal fever caused by either breast engorgement or infection among women who do not nurse their newborn infants.[11] The indication of postpartum breast engorgement was removed in the United States in 1994 because of serious maternal toxicity, including stroke (some fatal), convulsions, myocardial infarction (some fatal) and severe hypertension.[12] One study found that seizure risk was decreased in the early puerperium, but increased slightly later.[13] Cerebral angiopathy, stroke and seizures continue to be reported from countries where bromocriptine is still used to suppress lactation.[14][15][16]

An early double-blind study in 60 women who were less than 24 hours postpartum found bromocriptine to be as effective as diethylstilbestrol in suppressing postpartum lactation. Bromocriptine was given in a dosage of 5 mg twice daily for 6 days followed by 5 mg three times daily for 3 days. Diethylstilbestrol dosage was 20 mg twice daily for 3 days, followed by 10 mg twice daily for 3 days, then 10 mg daily for 3 days.[17]

Hyperprolactinemia and galactorrhea have been reported occasionally after withdrawal of long-term therapy with high doses (5 to 10 mg 3 times daily) of bromocriptine for treatment of parkinsonism.[18]

In women given bromocriptine immediately postpartum, the composition of milk is altered from the milk of normal lactation. Most protein constituents (e.g., total protein, albumin, alpha-lactalbumin, lactoferrin, IgA and IgG) appear in higher concentrations than normal, similar to those of colostrum. Lactose levels are suppressed.[19]

A study in 14 women who were overproducing milk on day 3 postpartum found that oral bromocriptine 2.5 mg once daily for 3 days reduced serum prolactin to subnormal levels, but rebounded to control levels by 36 hours after the last dose. In contrast, the milk yield decreased by 25% from baseline and the decrease persisted for at least 12 days afer the last dose.[6]

A woman who was treated with bromocriptine 5 mg daily for the amenorrhea-galactorrhea syndrome during pregnancy continued taking the drug in the same dosage after delivery and successfully breastfed her infant.[20]

In a case series of 40 women with pituitary adenoma and hyperprolactinemia, 30 of the women took bromocriptine 2.5 or 5 mg daily during pregnancy. Thirty of the 40 women were able to breastfeed successfully, although it is not clear from the paper how many of the mothers continued to take bromocriptine during nursing.[7]

A mother who was receiving bromocriptine (dosage not stated) for hyperprolactinemia from a pituitary macroadenoma successfully breastfed her infant partially for 2 days and exclusively from the third day postpartum onward (total duration not stated). She received support from professionals and a relative who was nursing.[8]

A mother with a prolactinoma took bromocriptine during pregnancy and postpartum. She was able to breastfeed her infant.[21]

Alternate Drugs to Consider

(Lactation Suppression; Hyperprolactinemia) Cabergoline

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Substance Identification

Substance Name

Bromocriptine

CAS Registry Number

25614-03-3

Drug Class

Breast Feeding

Lactation

Antiparkinson Agents

Dopamine Agonists

Ergot Alkaloids