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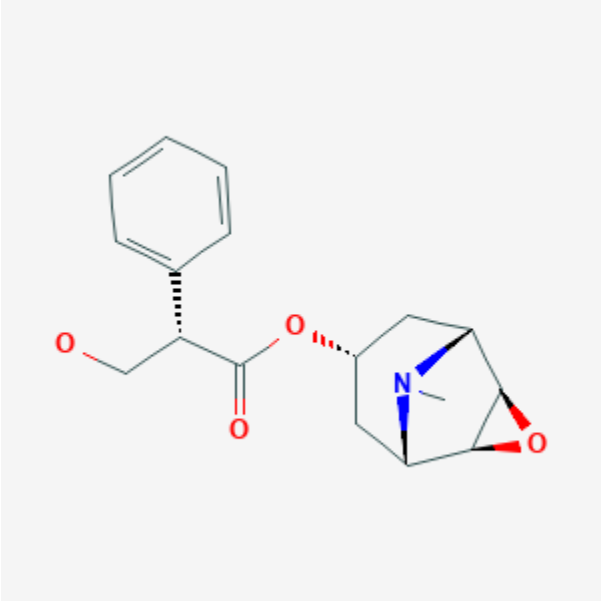
Scopolamine

Revised: October 31, 2018.

CASRN: 51-34-3



Drug Levels and Effects

Summary of Use during Lactation

No information is available on the use of scopolamine during breastfeeding. Use during labor appears to have a detrimental effect on newborn infants' nursing behavior. Long-term use of scopolamine might reduce milk production or milk letdown, but a single systemic or ophthalmic dose is not likely to interfere with breastfeeding. During long-term use, observe for signs of decreased lactation (e.g., insatiety, poor weight gain). To substantially diminish the amount of drug that reaches the breastmilk after using eye drops, place pressure over the tear duct by the corner of the eye for 1 minute or more, then remove the excess solution with an absorbent tissue.

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

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

Effects on Lactation and Breastmilk

Anticholinergics can inhibit lactation in animals, apparently by inhibiting growth hormone and oxytocin secretion.[1][2][3][4][5] Anticholinergic drugs can also reduce serum prolactin in nonnursing women.[6] The prolactin level in a mother with established lactation may not affect her ability to breastfeed.

A retrospective case-control study conducted in two hospitals in central Iran compared breastfeeding behaviors in the first 2 hours postdelivery by infants of 4 groups of primiparous women with healthy, full-term singleton births who had vaginal deliveries. The groups were those who received no medications during labor, those who received oxytocin plus scopolamine, those who received oxytocin plus meperidine, and those who received oxytocin, scopolamine and meperidine. The infants in the no medication group performed better than those in all other groups, and the oxytocin plus scopolamine group performed better than the groups that had received meperidine.[7]

References

1. Aaron DK, Ely DG, Deweese WP et al. Reducing milk production in ewes at weaning using restricted feeding and methscopolamine bromide. J Anim Sci. 1997;75:1434-42. PubMed PMID: 9250502.
2. Powell MR, Keisler DH. A potential strategy for decreasing milk production in the ewe at weaning using a growth hormone release blocker. J Anim Sci. 1995;73:1901-5. PubMed PMID: 7592071.
3. Daniel JA, Thomas MG, Powell MR, Keisler DH. Methscopolamine bromide blocks hypothalmic-stimulated release of growth hormone in ewes. J Anim Sci. 1997;75:1359-62. PubMed PMID: 9159285.
4. Bizzarro A, Iannucci F, Tolino A et al. Inhibiting effect of atropine on prolactin blood levels after stimulation with TRH. Clin Exp Obstet Gynecol. 1980;7:108-11. PubMed PMID: 6788407.
5. Svennersten K, Nelson L, Juvnas-Moberg K. Atropinization decreases oxytocin secretion in dairy cows. Acta Physiol Scand. 1992;145:193-4. PubMed PMID: 1636447.
6. Masala A, Alagna S, Devilla L et al. Muscarinic receptor blockade by pirenzepine: effect on prolactin secretion in man. J Endocrinol Invest. 1982;5:53-5. PubMed PMID: 6808052.
7. Hemati Z, Abdollahi M, Broumand S et al. Association between newborns' breastfeeding behaviors in the first two hours after birth and drugs used for their mothers in labor. Iran J Child Neurol. 2018;12:33-40. PubMed PMID: 29696044.

Substance Identification

Substance Name

Scopolamine

CAS Registry Number

51-34-3

Drug Class

Breast Feeding

Lactation

Adjuvants, Anesthesia

Mydriatics

Muscarinic Antagonists

Parasympatholytics