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Belladonna

Revised: May 17, 2021.

CASRN: 8007-93-0

Drug Levels and Effects

Summary of Use during Lactation

Belladonna (*Atropa belladonna*) contains anticholinergic alkaloids such as atropine and scopolamine. Belladonna has been used in the past for headache, airway obstruction, and irritable bowel syndrome among others, but its use has been supplanted by more specific and less toxic compounds. Long-term use of belladonna might reduce milk production by reducing serum prolactin.[1] Application of belladonna paste to the nipple to reduce milk secretion during lactation is an extremely old use.[2] However, it is still used this way in rural India for treating breast abscesses and may have contributed to cases of breast gangrene.[3] Because of the narrow therapeutic index and variable potency of plant-based (i.e., nonstandardized) belladonna, it should be avoided orally and topically during lactation. Homeopathic products are not likely to interfere with breastfeeding or cause toxicity.

Dietary supplements do not require extensive pre-marketing approval from the U.S. Food and Drug Administration. Manufacturers are responsible to ensure the safety, but do not need to *prove* the safety and effectiveness of dietary supplements before they are marketed. Dietary supplements may contain multiple ingredients, and differences are often found between labeled and actual ingredients or their amounts. A manufacturer may contract with an independent organization to verify the quality of a product or its ingredients, but that does *not* certify the safety or effectiveness of a product. Because of the above issues, clinical testing results on one product may not be applicable to other products. More detailed information about dietary supplements is available elsewhere on the LactMed Web site.

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

Specific published information in nursing mothers was not found as of the revision date. Anticholinergics can inhibit lactation in animals, apparently by inhibiting growth hormone and oxytocin secretion.[4-8] Anticholinergic drugs can also reduce serum prolactin in nonnursing women.[1] The prolactin level in a mother with established lactation may not affect her ability to breastfeed.

References

1. 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.
2. Hughes R. Cases illustrative of the influence of belladonna. Br Med J 1860;s4-1 (193):706-7. PMC2252955
3. Wani I, Bakshi I, Parray FQ, et al. Breast gangrene. World J Emerg Surg. 2011;6:29. PubMed PMID: 21854557.
4. 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.
5. 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.
6. Daniel JA, Thomas MG, Powell MR, et al. Methscopolamine bromide blocks hypothalmic-stimulated release of growth hormone in ewes. J Anim Sci. 1997;75:1359–62. PubMed PMID: 9159285.
7. 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.
8. Svennersten K, Nelson L, Juvnäs-Moberg K. Atropinization decreases oxytocin secretion in dairy cows. Acta Physiol Scand. 1992;145:193–4. PubMed PMID: 1636447.

Substance Identification

Substance Name

Belladonna

CAS Registry Number

8007-93-0

Drug Class

Breast Feeding

Lactation

Mydriatics

Parasympatholytics

Muscarinic Antagonists

Complementary Therapies

Phytotherapy

Plants, Medicinal