



Botulinum Poisoning

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Drug Levels and Effects

Summary of Use during Lactation

Breastfeeding is considered to be a risk factor for infant botulism via direct exposure, possibly because of changes in the intestinal flora during weaning.[1] An epidemiologic study in California in 1976-1978 found the age of onset of the disease to be later in breastfed infants (13.8 weeks) than in formula-fed infants (7.6 weeks) and no breastfed infants died from the disease, whereas 8 cases of sudden death from botulism occurred in formula-fed infants.[2] A subsequent study found no difference in severity between breast- and formula-fed infants.[3] Little information is available on the transfer of the botulinum toxin into breastmilk. Mothers suspected of having botulinum poisoning should not breastfeed until they have recovered.

Drug Levels

Maternal Levels. Type A botulinum toxin was detected in the blood and stools of a nursing mother after ingesting fermented salmon eggs. The mother was given 2 vials of trivalent botulism antitoxin, 1 intravenously and 1 intramuscularly. A milk sample obtained 4 hours after administration of the antitoxin had no detectable botulinum toxin nor botulism organisms.[4]

Infant Levels. Type A botulinum toxin was detected in the blood and stools of a nursing mother after ingesting fermented salmon eggs. No botulinum toxin was detected in the infant's blood or stool on the day the mother was admitted to the hospital and no botulism organisms were detected in the infant's stools.[4]

Effects in Breastfed Infants

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

Effects on Lactation and Breastmilk

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

References

1. Brook I. Infant botulism. *J Perinatol.* 2007;27:175–80. PubMed PMID: 17314986.

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2. Arnon SS, Damus K, Thompson B, et al. Protective role of human milk against sudden death from infant botulism. *J Pediatr.* 1982;100:568–73. PubMed PMID: 7038077.
3. Spika JS, Shaffer N, Hargrett-Bean N, et al. Risk factors for infant botulism in the United States. *Am J Dis Child.* 1989;143:828–32. PubMed PMID: 2741856.
4. Middaugh J. Botulism and breast milk. *N Engl J Med.* 1978;298:343. PubMed PMID: 622098.

Substance Identification

Substance Name

Botulinum Poisoning

Drug Class

Breast Feeding

Lactation

Foodborne Diseases

Poisoning