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NLM Citation: Drugs and Lactation Database (LactMed) [Internet]. Bethesda (MD): National Library of Medicine (US); 2006-. Aflibercept. [Updated 2020 Feb 17].
Bookshelf URL: https://www.ncbi.nlm.nih.gov/books/

Aflibercept

Revised: February 17, 2020.

CASRN: 862111-32-8

Drug Levels and Effects

Summary of Use during Lactation

This record refers to the use of intravitreal aflibercept. Aflibercept inhibits vascular endothelial growth factor (VEGF). Aflibercept is a is a large protein molecule with a molecular weight of 115,000, absorption is unlikely because it is probably destroyed in the infant's gastrointestinal tract, so systemic effects in infants are not expected. Since VGEF is present in human milk and is thought to help in maturation of the infant's gastrointestinal tract, concern has been raised about the maternal use of VGEF inhibitors during breastfeeding. The manufacturer estimates that after intravitreal administration of 2 mg, the mean maximum plasma concentration of free aflibercept is more than 100-fold lower than the concentration of aflibercept required to half-maximally bind systemic vascular endothelial growth factor. In a woman who did not breastfeed had decreasing VGEF levels in milk over a 4-day period. Note that the typical alternative to breastmilk is infant formula, which contains no VGEF.

Drug Levels

Maternal Levels. A woman with diabetic macular edema was given intravitreal aflibercept 2 mg one week postpartum. She was not breastfeeding her infant. Milk samples were obtained before the injection and on days 1-4 after the injection. Aflibercept was detected only on day 4 in a concentration of 10.9 mcg/L.[1]

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

A woman with diabetic macular edema was given intravitreal aflibercept 2 mg one week postpartum. She was not breastfeeding her infant. Milk samples were obtained before the injection and on days 1-4 after the injection. VEGF levels were reduced from 10.6 mcg/L at baseline to 4.9 mcg/L on day 1, where it remained for the next 3 days.[1]

Alternate Drugs to Consider

(Intravitreal) Bevacizumab, Ranibizumab

References

1. Juncal VR, Paracha Q, Bamakrid M, et al. Ranibizumab and aflibercept levels in breast milk after intravitreal injection. Ophthalmology. 2020;127:278–80. PubMed PMID: 31526521.

Substance Identification

Substance Name

Aflibercept

CAS Registry Number

862111-32-8

Drug Class

Breast Feeding

Lactation

Angiogenesis Inhibitors

Recombinant Fusion Proteins