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Bevacizumab

Revised: February 17, 2020.

CASRN: 216974-75-3

Drug Levels and Effects

Summary of Use during Lactation

No information is available on the intravenous use of bevacizumab during breastfeeding. Because bevacizumab is a large protein molecule with a molecular weight of about 149,000, the amount in milk is likely to be very low and absorption is unlikely because it is probably destroyed in the infant's gastrointestinal tract.[1] Until more data become available, intravenous bevacizumab should be used with caution during breastfeeding, especially while nursing a newborn or preterm infant. The manufacturer recommends that breastfeeding be discontinued during bevacizumab therapy and for 6 months following the last dose.

Bevacizumab is a vascular endothelial growth factor (VEGF) inhibitor. A few infants have been breastfed, apparently without noticeable harm, following maternal intravitreal bevacizumab injections. Bevacizumab was undetectable in the milk of one mother, but VGEF levels in breastmilk were suppressed following the injection. 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. Note that the typical alternative to breastmilk is infant formula, which contains no VGEF.

Drug Levels

Maternal Levels. A woman was given 3 intravitreal injections of bevacizumab for scar-associated choroidal neovascularization in her left eye. Her breastfed infant was 12 weeks old at the start of therapy. The bevacizumab dose and interval were not stated in the published report, but the usual intravitreal dose is 1.25 mg. After the first injection, bevacizumab was detectable in the maternal serum with a peak between 0.6 and 0.7 mcg/L at one week, but bevacizumab was not detectable in breastmilk at any time over the 42 days following injection. Vascular endothelial growth factor (VEGF) was also measured in serum and breastmilk. After the intravitreal injection of bevacizumab, the VEGF level in breastmilk decreased from 13.3 to 8.6 mcg/L over a 2-week period. After changing therapy to ranibizumab, no decrement in breastmilk VEGF was seen.[2]

Two women received intravitreal injections of bevacizumab 1.25 mg at 1- to 2-month intervals while breastfeeding. Breastmilk samples were obtained one day before and one week after injections for 6 months in one and 16 months in the other woman. Bevacizumab was undetectable (<3 mcg/L) in any of the samples.[3]

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

Effects in Breastfed Infants

A 33-year-old woman was treated with 14 intravitreal bevacizumab injections of 1.25 mg over a 20-month period. Five of these injections were given while she was breastfeeding (age of infant not stated). No mention was made of adverse effects in this infant, but she became pregnant again, received 3 additional injections, and delivered an infant who developed normally at 12 months of age.[4]

A woman was given 3 intravitreal injections of bevacizumab for scar-associated choroidal neovascularization in her left eye. Her breastfed infant was 12 weeks old at the start of therapy. No mention was made of adverse effects in this infant.[2] Two women received intravitreal injections of bevacizumab 1.25 mg at 1- to 2-month intervals while breastfeeding. They breastfed their infants (extent not stated) for several months. No adverse effects in the infants were noted.[3]

Effects on Lactation and Breastmilk

A woman was given 3 intravitreal injections of bevacizumab for scar-associated choroidal neovascularization in her left eye. Vascular endothelial growth factor (VEGF) was also measured in serum and breastmilk. After the intravitreal injection of bevacizumab, the VEGF level in breastmilk decreased from 13.3 to 8.6 mcg/L over a 2-week period. After changing therapy to ranibizumab, no decrement in breastmilk VEGF was seen.[2]

Alternate Drugs to Consider

(Intravitreal) Ranibizumab

References

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Substance Identification

Substance Name

Bevacizumab

CAS Registry Number

216974-75-3

Drug Class

Breast Feeding

Lactation

Angiogenesis Inhibitors

Antibodies, Monoclonal

Antineoplastic Agents