U.S. National Library of Medicine
National Center for Biotechnology Information

NLM Citation: Drugs and Lactation Database (LactMed) [Internet]. Bethesda (MD): National Library of Medicine (US); 2006-. Xenon Xe 133. [Updated 2019 Jun 30].
Bookshelf URL: https://www.ncbi.nlm.nih.gov/books/

Xenon Xe 133

Revised: June 30, 2019.

CASRN: 14932-42-4

Drug Levels and Effects

Summary of Use during Lactation

Information in this record refers to the use of xenon Xe 133 as a diagnostic agent. Because of its low systemic bioavailability after inhalation, the International Commission on Radiological Protection and other experts state breastfeeding need not be interrupted after administration of xenon Xe 133.[1][2][3]

Drug Levels

Xenon 133 is a beta emitter with a physical half-life of 5.24 days. Because of the poor solubility of xenon Xe 133, the amount that enters the venous circulation after inhalation is negligible. The small amount of xenon Xe 133 gas that passes into the venous circulation returns rapidly to the lungs to be exhaled.

Maternal Levels. Excretion of nonradioactive xenon in breastmilk was studied in 2 women who underwent about 1 hour of xenon anesthesia with a 65 to 69% inhaled xenon concentration. One mother consumed 8.3 L of xenon and the other had consumed 10 L during the procedure. Milk samples taken at 90 and 300 minutes after extubation contained no detectable xenon.[4]

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

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

References

1. Stabin MG, Breitz HB. Breast milk excretion of radiopharmaceuticals: mechanisms, findings, and radiation dosimetry. J Nucl Med. 2000;41:863-73. PubMed PMID: 10809203.
2. Parker JA, Coleman RE, Grady E et al. SNM practice guideline for lung scintigraphy 4.0. J Nucl Med Technol. 2012;40:57-65. PubMed PMID: 22282651.
3. Mattsson S, Johansson L, Leide Svegborn S et al. Radiation dose to patients from radiopharmaceuticals: A compendium of current information related to frequently used substances. Annex D. Recommendations on breast-feeding interruptions. Ann ICRP. 2015;44 (2 Suppl):319-21. PubMed PMID: 26069086.
4. Stuttmann R, Schafer C, Hilbert P et al. The breast feeding mother and xenon anaesthesia: four case reports. Breast feeding and xenon anaesthesia. BMC Anesthesiol. 2010;10:1. PubMed PMID: 20167123.

Substance Identification

Substance Name

Xenon Xe 133

CAS Registry Number

14932-42-4

Drug Class

Breast Feeding

Lactation

Radiopharmaceuticals

Xenon Radioisotopes

Diagnostic Agents