Faculty of Radiologists Guideline on iodinated and gadolinium based contrast administration in breastfeeding women 2017.

Dr Gabrielle Colleran, Wendy Jones PhD, Prof Leo Lawler, Prof Max Ryan.

Summary:

Iodinated (CT) and gadolinium based (MR) contrast agents are safe in Breastfeeding Mothers. Women should be advised to continue nursing their children as normal without any interruption to breastfeeding post imaging. It is important to avoid unnecessary interruptions to breastfeeding due to the health risks to the nursing dyad of potential early weaning and the risk of mastitis in the Mother. The Faculty position is in line with best international practice as outlined below and guidelines will be updated annually.

Background:

Breastfeeding rates are increasing in Ireland and as a result more nursing Mothers come in contact with the radiology department and require imaging, sometimes with iodinated (CT) or gadolinium based contrast media (MR) required as part of the protocol. As a result Radiologists are increasingly being asked whether these women can continue to nurse their children as normal or if a period of interruption is required. The faculty surveyed its fellows in the Summer of 2017 and a preference for a national guideline was expressed.

Evidence:

CT: Less than 1% of the administered dose to the Mother is excreted into breastmilk and of this less than 1% of this dose is absorbed by the infant. No adverse effects have been reported in the literature. Mothers can be safely advised to continue nursing without interruption [1-6]. This is consistent with the recommendation from the American college of radiology [4].

MRI: Research studies demonstrates that less than 0.04% of the dose administered intravenously to the Mother is excreted into her breast milk in the first 24 hours, and of that which is ingested by the infant, less than 1% is absorbed from its gastrointestinal tract resulting in a dose to the infant which is less than 0.0004% the dose administered to the Mother, [4-9]. Mothers can therefore be safely advised to continue nursing without interruption. This recommendation is consistent with the recommendation from the American college of radiology [4].

References:

1. Bettmann MA (2004) Frequently asked questions: iodinated contrast agents. Radiographics 24 Suppl 1:S3-10.
2. Webb JA, Thomsen HS, Morcos SK, et al (2005) The use of iodinated and gadolinium contrast media during pregnancy and lactation. Eur Radiol 15:1234-1240.
3. Tremblay E, Therasse E, Thomassin-Naggara I, et al (2012) Quality initiatives: guidelines for use of medical imaging during pregnancy and lactation. Radiographics 32:897-911.
4. ACR (2016) ACR Manual on Contrast Media – Version 10.2, 2016:102.
5. Cova MA, Stacul F, Quaranta R, et al (2014) Radiological contrast media in the breastfeeding woman: a position paper of the Italian Society of Radiology (SIRM), the Italian Society of Paediatrics (SIP), the Italian Society of Neonatology (SIN) and the Task Force on Breastfeeding, Ministry of Health, Italy. Eur Radiol 24:2012-2022.
6. Newman J (2007) Breastfeeding and radiologic procedures. Can Fam Physician 53:630-631.
7. Wang PI, Chong ST, Kielar AZ, et al (2012) Imaging of pregnant and lactating patients: part 1, evidence-based review and recommendations. AJR Am J Roentgenol 198:778-784.
8. Rofsky NM, Weinreb JC, Litt AW (1993) Quantitative analysis of gadopentetate dimeglumine excreted in breast milk. J Magn Reson Imaging 3:131-132.
9. Kubik-Huch RA, Gottstein-Aalame NM, Frenzel T, et al (2000) Gadopentetate dimeglumine excretion into human breast milk during lactation. Radiology 216:555-558.