Breastfeeding and Medication

Breastfeeding and termination of pregnancy

Sadly pregnancies can be unplanned and mothers may have to make the difficult decision to terminate for a variety of reasons. They may still be breastfeeding an older child. It is possible to continue to breastfeed after a surgical or medical termination.

The regimen depends on the stage of pregnancy of the woman. Guidelines have been provided by the Royal College of Obstetricians and Gynaecologists (2015) but can vary between providers. Normally, if the pregnancy is less than 14 weeks, the woman swallows a tablet of 200 mg mifepristone followed 24–48 hours later by misoprostol 800 micrograms given by the vaginal, buccal or sublingual route.

A surgical procedure is also available using vacuum aspiration under general anaesthetic. Breastfeeding can continue as soon as the mother is awake and alert.

Royal College of Obstetricians and Gynaecologists (RCOG), Best Practice in Comprehensive Abortion Care, 2015, www.rcog.org.uk/globalassets/documents/guidelines/best-practice-papers/best-practice-paper-2.pdf.

Mifepristone

One study (Sääv et al. 2010) collected milk samples from 12 women who had had medical termination over seven days (two given mifepristone 200 mg; ten given mifepristone 600 mg). Maternal serum levels were taken on day three and data were used to calculate m/p ratio at that time. Levels of mifepristone in breastmilk were highest in six–nine hours after administration in those women receiving 600 mg (0.063–0.913 µmol per litre equivalent to 5.6 µg per litre). Levels in those given 200 mg were below the level of detection at all times (<0.013 µmol/litre). Levels in nine of the women given 600 mg averaged 172 µg per litre on day one and 66 µg per litre on day two. Levels in all ten women were 31 µg per litre on day three and levels in four women were 24 µg per litre on day four. Levels measured in three women were 25 µg per litre on day five providing a calculated relative infant dose 0.5–1.5%.

The usual dose for medical termination being 200 mg there would appear to be no reason to interrupt breastfeeding at all. If the mother vomits and has to take a second dose a period of discontinuation of six to nine hours would seem adequate based on the data from Sääv et al.'s study. Despite the fact that research is limited in the number of subjects studied, the results confirm the conclusions from the pharmacokinetic data that milk transfer of mifepristone is low.

Hale (2017 online access) states that: 'Mifepristone transfers into human milk is probably negligible'. Sääv et al. conclude that: 'The levels of mifepristone in milk are low, especially when using the 200 mg dose. Breastfeeding can be safely continued in an uninterrupted manner during medical abortion of this kind'. The BNF does not comment on passage into breastmilk.

Compatible with use during breastfeeding with a maternal dose of 200 mg and informed discussion with the mother.

Reference

- Sääv I, Fiala C, Hämäläinen JM, Heikinheimo O, Gemzell-Danielsson K, Medical abortion in lactating women – low levels of mifepristone in breastmilk, Acta Obstet Gynecol Scand, 2010;89(5):618–22.

Misoprostol

Misoprostol is a prostaglandin E1 analogue (prostaglandin E1 and others appear naturally in breastmilk). Levels in breastmilk are likely to be low based on pharmacokinetic data; high plasma protein binding of 80–90% and low m/p ratio 0.05 although it is 100% bio-available. With a half-life of a maximum of 20 to 40 minutes all of the drug will have left the mother's body within 3.3 hours. It has a relative infant dose quoted as 0.04% (Hale 2017 online access).

One study (Abdel-Aleem et al. 2003) looked at 20 women given 600 µg orally during the first four days post-partum and measured levels in colostrum of 12 women during the first five hours. The average level was highest after one hour (20.9 ng per millilitre) falling to 17.8 ng per millilitre after two hours, 9.4 ng per millilitre at three hours, 2.8 ng per millilitre at four hours and <1 ng per millilitre at five hours post-dose.

In a study by Vogel et al. (2004) the half-life in breastmilk averaged 1.1 hours (at which point the mean levels of misoprostol acid, the active metabolite, were 7.6 pg per millilitre) following a maternal dose of 200 µg. Breastmilk misoprostol levels were found to rise and decline rapidly in the ten women studied. In two women, the peak level was noted at two hours post-dose. At five hours the levels of misoprostol acid were 0.2 pg per millilitre. Vogel suggested that an interval of four hours should elapse before breastfeeding when levels are below 1 pg per millilitre and that infants should be monitored for signs of diarrhoea.

There are no studies on the amount of misoprostol passing into mature milk after oral administration of the drug. The Vogel et al. (2004) and Abdel-Aleem et al. (2003) studies took place where the mothers were less than four days post-partum. In neither of the studies were the infants breastfed.

The recommendation that a mother discontinue breastfeeding for four hours (Vogel et al. 2004) is based on the time for the level in milk to fall below 1 pg per millilitre. The Specialist Pharmacy Service (2016) suggest that no interruption of breastfeeding is necessary following misoprostol, although the mother could interrupt breastfeeding for five hours after an oral dose to reduce any risk. LactMed (2017) suggests that 'because of the low levels of misoprostol in breastmilk, amounts ingested by the infant are small and would not be expected to cause any adverse effects in breastfed infants. No special precautions are required'. The BNF says that misoprostol is present in breastmilk, but in an amount probably too small to be harmful.

Breastfeeding can continue as normal after the use of misoprostol to terminate pregnancy or for medical management of miscarriage. Interruption for four hours may be advised to reduce the risk of diarrhoea in the nursling.

References

- Abdel-Aleem H, Villar J, Gülmezoglu AM, Mostafa SA, Youssef AA, Shokry M, Watzer B, The pharmacokinetics of the prostaglandin E1 analogue misoprostol in plasma and colostrum after post-partum oral administration, Eur J Obstet Gynecol Reprod Biol, 2003;108:25–8.
- Specialist Pharmacy Service, Can Mothers Breastfeed after a Medical Termination of Pregnancy? NHS, 2016, www.sps.nhs.uk.
- Vogel D, Burkhardt T, Rentsch K, Schweer H, Watzer B, Zimmermann R, Von Mandach U, Misoprostol versus methylergometrine: pharmacokinetics in human milk, Am J Obstet Gynecol, 2004;191:2168–73.