

DRUG INFORMATION

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SAFETY OF RIFAMPICIN IN BREASTFEEDING

Question:

What is the safety of using rifampicin 600mg twice daily for 2 days while breastfeeding?

Answer:

The general consensus appears to be that rifampicin is relatively safe in breastfeeding because of the low quantities that pass into breast milk^[1-4]. However, we are aware of only two published reports that describe the transfer of rifampicin into breast milk^[5,6]. One of these studies^[6] is reported in a foreign-language journal so our ability to interpret this study is limited to relying on citations in other reference sources^[1,7,8].

Vorherr,^[5] reported that the maternal plasma rifampicin concentration was 5mg/L and breast milk concentrations ranged from 1 to 3mg/L after a "therapeutic dose" of rifampicin (the maternal dose was not explicitly stated)^[5]. This data was extremely difficult to interpret as no information was provided on the timing of the blood and milk samples in relation to the maternal dose, or the nature of the study (e.g. number of subjects).

In the second report^[6], a single dose of rifampicin 450mg was associated with 12 hour plasma concentrations of 21.3mg/L and breast milk concentrations of 3.4-4.9mg/L^[7,8]. The maternal plasma concentration reported in this study is considerably different than that expected from a 12 hour post-dose blood sample since other studies report peak rifampicin concentrations of 10-12mg/L (range: 4.8-18mg/L) following administration of a 600mg in fasting subjects^[3,9,10].

If it is assumed that peak maternal plasma concentration following a 600mg dose is approximately 10mg/L, peak milk concentration 2-6mg/L^[5,6], maternal dose is 1200mg per day, maternal weight is 60kg and infant milk ingestion is 0.15L/kg/day, then the weight-adjusted maternal daily dose is approximately 1.5-4.5%. This is below our arbitrary cut-off of 10% suggesting that rifampicin is compatible with breastfeeding.

Rifampicin may discolour bodily fluids such as tears to an orange-brown colour^[1]. This suggests breast milk may also be discoloured.

Conclusions:

The two studies that describe the transfer of rifampicin into breast milk are very difficult to interpret. After making several assumptions it appears that a breastfed infant is likely to receive <5% of the maternal dose, after adjusting for the difference in body weight. Most drugs are considered compatible with breastfeeding if the infant's dose is less than 10% of the maternal dose (weight-adjusted). However, it should be noted that higher infant exposure may be experienced in premature infants, or in those with hepatic or renal impairment. Ultimately, the general consensus is that the use of rifampicin is compatible with breastfeeding, and it seems likely that there is relatively extensive usage of this agent during breastfeeding in some parts of the world.

References:

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