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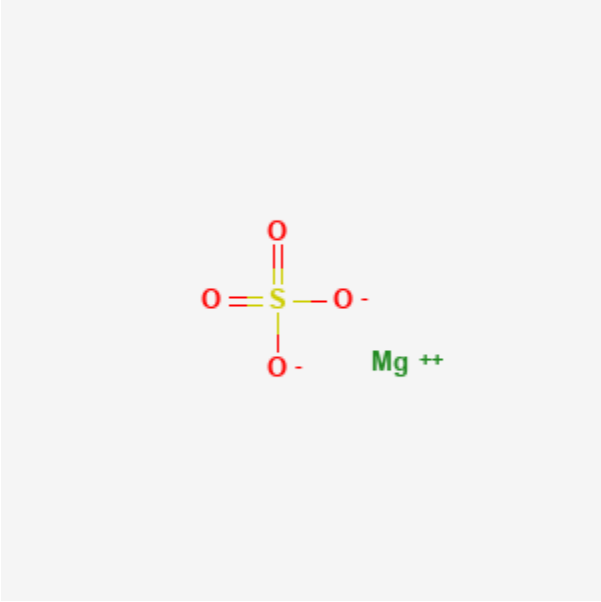
Magnesium Sulfate

Revised: April 1, 2019.

CASRN: 7487-88-9



Drug Levels and Effects

Summary of Use during Lactation

Intravenous magnesium increases milk magnesium concentrations only slightly and oral absorption of magnesium by the infant is poor, so maternal magnesium therapy is not expected to affect the breastfed infant's serum magnesium. Although intravenous magnesium sulfate given prior to delivery might affect the infant's ability to breastfeed, intention to breastfeed may be a more important determinant of breastfeeding initiation.[1] Postpartum use of intravenous magnesium sulfate for longer than 6 hours appears to delay the onset of lactation.[2][3]

Drug Levels

Maternal Levels. Ten women with pre-eclampsia were given 4 grams of magnesium sulfate intravenously followed by 1 gram per hour until 24 hours after delivery. While the average serum magnesium was 35.5 mg/L in

treated women compared to 18.2 mg/L in 5 untreated controls, colostrum magnesium levels at the time of discontinuation of the infusion was 64 mg/L in treated women and 48 mg/L in the controls. By 48 hours after discontinuation, colostrum magnesium levels were only slightly above control values and by 72 hours they were virtually identical to controls.[4]

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

Effects in Breastfed Infants

Fifty mothers who were in the first day postpartum received 15 mL of either mineral oil or an emulsion of mineral oil and another magnesium salt, magnesium hydroxide equivalent to 900 mg of magnesium hydroxide, although the exact number who received each product was not stated. Additional doses were given on subsequent days if needed. None of the breastfed infants were noted to have any markedly abnormal stools, but all of the infants also received supplemental feedings.[5]

Effects on Lactation and Breastmilk

One mother who received intravenous magnesium sulfate for 3 days for pregnancy-induced hypertension had lactogenesis II delayed until day 10 postpartum. No other specific cause was found for the delay, although a complete work-up was not done.[6] A subsequent controlled clinical trial found no evidence of delayed lactation in mothers who received intravenous magnesium sulfate therapy.[7] Some, but not all, studies have found a trend toward increased time to the first feeding or decreased sucking in infants of mothers treated with intravenous magnesium sulfate during labor because of placental transfer of magnesium to the fetus.[7][8] Another study found that among women with severe pre-eclampsia who received intravenous magnesium sulfate for up to one day postpartum and who intended to breastfeed, 85% of infants receiving routine well-baby care and 69% of those admitted to the NICU, breastfeeding was successfully initiated.[1]

A study randomized women with preeclampsia to receive intravenous magnesium sulfate for either 6 or 24 hours postpartum. There was no difference in the rate of eclampsia between the two groups. However, those who received the infusion for 24 hours had a delayed onset of lactation, 36.5 hours compared with 25.7 hours in the 6-hour group.[2]

A prospective, multicenter, randomized, controlled trial in 9 Latin American maternity hospitals compared patients with severe pre-eclampsia who had received at least 8 grams of magnesium sulfate prior to placebo. Patients were randomized to continue magnesium sulfate for 24 hours postpartum (n = 555) or stopping the infusion (n = 558). The time to lactation was significantly delayed in those who received magnesium sulfate postpartum (24.1 vs. 17.1 hours).[3]

Alternate Drugs to Consider

(Laxative) Docusate, Magnesium Hydroxide, Psyllium, Sodium Picosulfate, Sodium Phosphate

References

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Substance Identification

Substance Name

Magnesium Sulfate

CAS Registry Number

7487-88-9

Drug Class

Breast Feeding

Lactation

Anti-Arrhythmia Agents

Anticonvulsants

Cathartics

Gastrointestinal Agents

Magnesium Compounds

Tocolytic Agents