

Evidence Update

Maternal Health Series

November 2005

How effective is magnesium sulphate compared to diazepam for women with eclampsia?

Magnesium sulphate appears to be substantially more effective than diazepam for treating eclampsia.

Inclusion criteria

Types of studies:

Randomized trials comparing magnesium sulphate with diazepam; quasi-random designs were excluded.

Types of participants:

Women with a clinical diagnosis of eclampsia at trial entry irrespective of whether they were before or after delivery, had a singleton or multiple pregnancy, or whether an anticonvulsant had been given before trial entry.

Types of intervention:

All randomized comparisons of magnesium sulphate (intravenous or intramuscular administration) with diazepam.

Types of outcome measures:

Maternal death; caesarean section; labour < 8hr; blood loss at delivery > 500ml; mortality for the baby; and morbidity for liveborn babies.

Results

- Seven trials involving 1441 women were included. Three were adequately concealed.
- Magnesium sulphate was associated with a substantial reduction in the recurrence of convulsions when compared to diazepam (relative risk 0.44, 95% confidence interval 0.34 to 0.57).
- Maternal mortality was also reduced, although this difference was borderline for statistical significance (RR 0.59, 95% CI 0.37 to 0.94).
- Magnesium sulphate was associated with fewer babies with low Apgar scores at five minutes (scores < 7 RR 0.72, 95% CI 0.55 to 0.94); and fewer babies kept in intensive care units for seven days or more (RR 0.66, 95% CI 0.46 to 0.95).



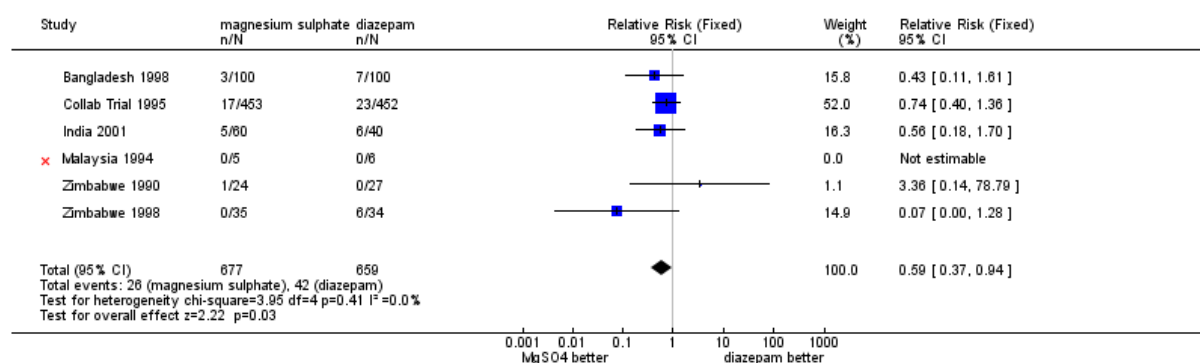
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Adapted from Duley L, Henderson-Smart D. Magnesium sulphate versus diazepam for eclampsia. *The Cochrane Database of Systematic Reviews* 2003, Issue 4. Art. No.: CD000127. DOI: 10.1002/14651858.CD000127.

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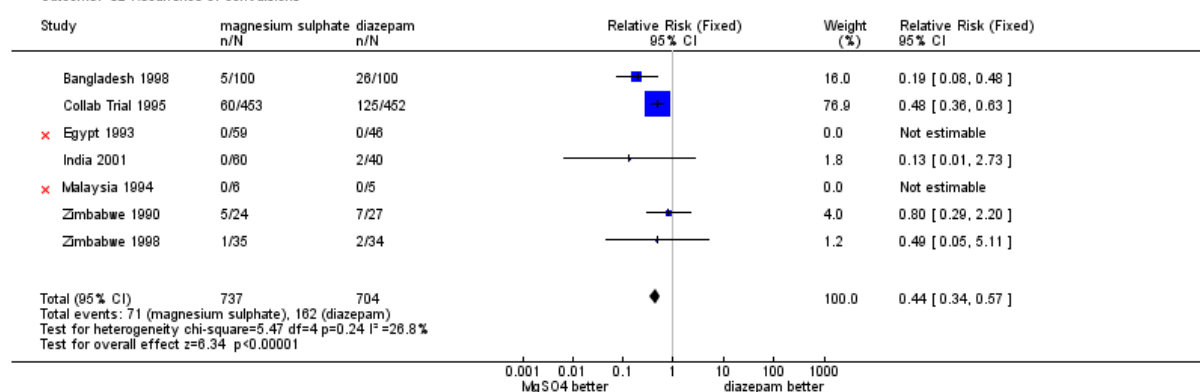
Magnesium sulphate versus diazepam: maternal death

Review: Magnesium sulphate versus diazepam for eclampsia
 Comparison: 01 Magnesium sulphate versus diazepam
 Outcome: 01 Maternal death



Magnesium sulphate versus diazepam: recurrence of convulsions

Review: Magnesium sulphate versus diazepam for eclampsia
 Comparison: 01 Magnesium sulphate versus diazepam
 Outcome: 02 Recurrence of convulsions



Authors' conclusions

Implications for practice:

For women with eclampsia, magnesium sulphate appears more effective than diazepam or phenytoin.

Implications for research:

Any new anticonvulsant drugs for women with eclampsia should be compared with magnesium sulphate, in appropriately designed randomized trials.