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[Intervention Review]

Alternative magnesium sulphate regimens for women with pre-eclampsia and eclampsia

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ABSTRACT

Background

Magnesium sulphate remains the drug of choice for both prevention and treatment of women with eclampsia. Regimens for administration of this drug have evolved over the years, but have not yet been formally evaluated.

Objectives

To assess the comparative effects of alternative regimens for the administration of magnesium sulphate when used for the care of women with pre-eclampsia or eclampsia, or both.

Search methods

We searched the Cochrane Pregnancy and Childbirth Group's Trials Register (June 2010).

Selection criteria

Randomised trials comparing different regimens for administration of magnesium sulphate used for the care of women with pre-eclampsia or eclampsia, or both.

Data collection and analysis

All four review authors assessed trial quality and extracted data independently.

Main results

We identified 17 studies of which six (866 women) met the inclusion criteria: two trials (451 women) compared regimens for women with eclampsia and four (415 women) for women with pre-eclampsia.

Treatment of eclampsia: one trial compared loading dose alone with loading dose plus maintenance therapy for 24 hours (401 women). There was no clear difference between the groups in the risk ratio (RR) of recurrence of convulsions (RR 1.13, 95% confidence interval (CI) 0.42 to 3.05) or stillbirth (RR 1.13, 95% CI 0.66 to 1.92), and the CIs are wide. One trial compared a low dose regimen with a standard dose regimen over 24 hours (50 women). This study was too small for any reliable conclusions about the comparative effects.

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Prevention of eclampsia: one trial compared intravenous with intramuscular maintenance regimen for 24 hours (17 women). This trial was too small for any reliable conclusions. Three trials compared short maintenance regimens postpartum with continuing for 24 hours after the birth (398 women), even taken together these trials were too small for any reliable conclusions.

Authors' conclusions

Although strong evidence supports the use of magnesium sulphate for prevention and treatment of eclampsia, trials comparing alternative treatment regimens are too small for reliable conclusions.

PLAIN LANGUAGE SUMMARY

Alternative magnesium sulphate regimens for women with pre-eclampsia and eclampsia

This review found that not enough research has been carried out to show what is the best dose for magnesium sulphate for women with pre-eclampsia or eclampsia, and how best to give it.

Pre-eclampsia (or toxemia) is a disorder that is usually associated with raised blood pressure (hypertension) and protein in the urine. It can occur at any time during the second half of pregnancy or in the first few weeks after delivery. Magnesium sulphate is effective in preventing eclampsia (a fit or seizure) in women who have pre-eclampsia, and for treating women who experience an eclamptic convulsion. The review authors included six trials (866 women). Two of the trials (451 women) recruited women with eclampsia and four trials (415 women) recruited women with pre-eclampsia. These randomised trials are too small to give reliable guidance on the advantages or disadvantages of the different regimens used. The included studies were carried out in both high-income and low-income countries.