

Single loading dose versus standard 24-hour magnesium sulfate in women with severe preeclampsia and eclampsia: A systematic review and meta-analysis

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Objectives: The primary goal of this study is to determine if a single loading dose of Magnesium Sulfate (MgSO₄) is comparable to standard 24-hour therapy in preventing seizures with severe preeclampsia and eclampsia.

Study Design: Meta-analysis and systematic review of six randomized controlled trials.

Patients/Subject Selection: Patients diagnosed with severe preeclampsia and eclampsia.

Intervention: Giving of single loading dose only (study group) versus 24-hour MgSO₄ therapy (control) in patients with severe preeclampsia and eclampsia.

Outcome Measures: (1) Anti-convulsant effects, (2) Maternal: Loss of deep tendon reflex and oliguria, incidences of caesarean section, hemolysis, elevated liver enzymes, low platelet (HELLP) syndrome, postpartum hemorrhage and intensive care unit admissions, and (3) Neonatal complications: Incidences of Neonatal Intensive Care Unit (NICU) admission, APGAR score at 5 minutes and death.

Results: Occurrence of seizures was similar in both groups. The risk difference of -0.00 (95% Confidence Interval (CI): -0.04 to 0.03; $p=0.84$) showed no significant difference and the combined studies were found to be homogenous with an I² of 0.0.

Conclusion: A single loading dose of MgSO₄ is comparable in preventing seizures of preeclamptic and eclamptic patients with similar maternal and neonatal complications except for a lesser occurrence of decreased patellar reflex in the study group ($p\leq 0.000001$).

Biography

Dirdrah Aina Crisostomo Salvador has completed her Residency training in Obstetrics and Gynecology in the Philippines.

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