

## ORIGINAL RESEARCH ARTICLE

# Is Serum Magnesium Estimate Necessary in Patients with Eclampsia on Magnesium Sulphate?

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## Abstract

The therapeutic index of magnesium is said to be low, hence, there are fears of toxicity when used as anticonvulsant in eclamptic patients. The objective of this study was to determine the serum levels of magnesium in eclamptic patients treated with magnesium sulphate and relate the levels with clinical indicators. It was a prospective study involving consecutive eclamptic patients that were managed between January and December 2002, with magnesium sulphate as the sole anticonvulsant agent, using a modified Pritchard regimen. Blood samples were taken before the administration of the loading and maintenance doses of magnesium sulphate and serum levels of magnesium were estimated using the Jenway 605 colorimeter. There were 19 patients and 72 blood samples. The mean baseline serum magnesium was  $0.72 \pm 0.10$ mmol/L while serum magnesium levels when the patients were on treatment ranged from 1.95 to 2.82mmol/L. No serum magnesium level was greater than 3.0mmol/L and none of the patients had clinical evidence of magnesium toxicity. We conclude that serum magnesium levels in these patients were within the therapeutic range, therefore, routine estimation of this cation is not necessary. Even where the laboratory facility is available, it is suggested that serum estimation be limited to cases where clinical monitors suggest toxicity. (*Afr J Reprod Health* 2005; 9[1]: 128-132)

**Keywords:** Eclampsia, serum, magnesium, toxicity, anticonvulsant

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