Original Paper

Correlation of total serum magnesium level with clinical outcomes in stroke patients

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Abstract

Background and Objective: Magnesium (Mg) ion has possible role in protecting neurons and glia from ischemic damage through the cerebral blood flow and neuronal action. This study was done to evaluate the correlation of total serum Mg level with clinical outcomes in stroke patients.

Materials and Methods: This cross sectional study was done on 316 patients whom diagnosed with stroke in Imam Hossein hospital, Tehran, Iran during 2010-11. Mg levels in all patients were measured. Also, recurrent transient ischemic attack (TIA), recurrent myocardial infarction or stroke, unstable angina and death as clinical outcomes were follow-up for period of 3 and 6 months after admission. Data were analyzed using SPSS-18, Chi-Square, Fisher and Pearson correlation tests.

Results: The mean age of patients was 65±15.8 year. Limb weakness (69.9%) and haemoplasia with 63.6% were the most common clinical complaints. Death was the most common finding in 3 month (16.8%) and recurrent stroke was the most common finding in 6 month follow up (2.5%). There was no significant difference between the total serum Mg and the first and second three-months follow up of clinical outcomes.

Conclusion: This study can not show a significant correlation between total serum Mg levels and clinical outcomes after 3 and 6 month follow up in stroke patients.

Keywords: Stroke, Magnesium, Haemoplasia

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