

Serum magnesium levels in patients with type 2 diabetes mellitus

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Dear Editor,

We read the recent article with a great interest entitled “Role of serum magnesium in diabetes mellitus - A case control study” published in the 4th issue of volume 5 (2018) of your esteemed journal. Menon MG et al.¹ reported that the serum magnesium levels in type 2 diabetic subjects as cases and apparently normal non-diabetic subjects as control were 1.89 ± 0.32 mg/dl and 2.26 ± 0.27 mg/dl respectively, and concluded that the serum magnesium levels were significantly decreased in subjects with diabetes mellitus as compared to control subjects.¹

However, we found certain discrepancies which we want to bring to your notice. The selection of study subjects seems to be as biased. The authors have included 50 subjects in each group (type 2 diabetic subjects as cases and apparently normal non-diabetic subjects as control). However, in a case-control study, it is very uncommon to have the same number of subjects in each group. If subjects have been selected randomly, then the authors should have mentioned the selection criteria of these subjects. Further, the authors should have excluded the subjects with hypercalcemia, as high serum calcium levels are known to cause hypomagnesemia.²

In addition, there is no mention of written informed consent being taken from the subjects at the time of enrollment in the study. The authors should have mentioned the serum magnesium levels in mmol/L, which is a SI unit for electrolytes measurement.³ Moreover, the sample size is

too small to derive any conclusion. Therefore, it is difficult to implicate hypomagnesemia as a risk factor for chronic complications in patients with type 2 diabetes mellitus based on their observations.

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References

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