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Serum magnesium and outcome in critically ill patients

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Background: Deficiency of magnesium is not uncommon in critical care, but a usually ignored electrolyte abnormality. Studies on magnesium in our country are lacking. We have correlated serum magnesium levels in critically ill patients with respect to the mortality, in hospital outcome and length of stay in the critical care.

Methods: A prospective, observational study was conducted in patients who had been admitted to the high dependency unit (HDU) of Combined Military Hospital, Dhaka. Patients were divided into normomagnesemic, hypomagnesemic and hypermagnesemic groups and compared for various parameters.

Results: Out of 60 patients, 32 patients (53.33%) were hypomagnesemic, 20 patients (33.33%) were normomagnesemic and 8 patients (13.33%) were hypermagnesemic. Associated electrolyte abnormalities in hypomagnesemic patients were hypokalemia (56.25%) and hypocalcaemia (62.50%). Most of the hypomagnesemic patients were hypertensive (62.50% vs. 40%) and was presented in drowsy state (50% vs. 40%) compared to normomagnesemic group. Mortality of hypomagnesemic group was 37.50% while that of hypermagnesemic group was 25% and 20% in normomagnesemic. Mean duration of length of stay in HDU was 11.45 ± 3.94 days in hypomagnesemic, 6.83 ± 2.48 days in normomagnesemic and 9.67 ± 5.68 days in hypermagnesemic group.

Conclusion: Development of magnesium imbalance in critically ill patients is associated with bad prognosis. Monitoring of serum magnesium levels may have prognostic, perhaps therapeutic implication.

Biography

Brig Gen Mamun Mostafi is the Chief Physician and Head of Nephrology of Bangladesh Army. He was the Professor of Nephrology and Executive Editor of *Journal of Armed Forces Medical College, Bangladesh*. He has more than 50 publications. He is the present Editor of *Bangladesh Renal Journal*. He has presented many papers and provided invited speaker presentations in many national and international forums.

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