Summary

- Hypomagnesemia is a common electrolyte imbalance in the critically ill patients. Hypomagnesemia is associated with higher mortality rate in critically ill patients and is also associated with more frequent and more prolonged ventilatory support. In the present study, our aims was to determine the frequency rate of hypomagnesemia in patients admitted to the pediatric intensive care unit (ICU),), and to identify subsets of patients (grouped by disease) who are at greatest risk of hypomagnesemia.
- To achieve this target, we prospectively studied a series of 60 consecutive patients admitted to Benha University Hospital PICU. It was seen in this study that hypomagnesemia is frequently associated with convulsion and diabetes mellitus.Although there was a high incidence of hypomagnesemia in the present study(50%), its correction after magnesium supplementation was not included as a part of the study.
- Results revealed the following:

On admission, 50% (30/60) patients had hypomagnesemia, and 50%(30/60) had normal serum magnesium levels.

- The incidence of hypocalcemia is significantly higher in patients with hypomagnesemia.
- Patients with hypomagnesemia need more ventilatory period than normmomagnesemic group.
- The incidence of hypokalemia is significantly higher in patients with hypomagnesemia.

Conclusions

There was a high incidance of hypomagnesemia in the critically ill patients. Hypomagnesemia was associated with a higher mortality rate in critically ill patients. The need for ventilatory support was significantly higher in hypomagnesemic patients. Hypomagnesemic patients required ventilator support for longer duration. Hypomagnesemia was commonly associated with convulsion, polytruma and diabetes mellitus. The duration of pICU stay on admission did not vary in patients with low magnesium and normal magnesium. Hypomagnesemia is more commonly seen in patients with hypocalcemia and hypoalbuminemia**.**