



The relationship between hypophosphatemia and outcomes during two different intensities of continuous renal replacement therapy



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Aim

To identify risk factors for development of hypophosphatemia in patients treated with two different intensities of continuous renal replacement therapy (CRRT) and to assess the independent association of hypophosphatemia with major clinical outcomes.

Materials and methods

We performed retrospective analysis of data collected from 620 patients. We allocated patients to two different intensities of CRRT (more than or less than 40 mL/kg/hour of effluent generation) and obtained daily measurement of serum phosphate levels.

Results

We obtained total 1800 phosphate measurements in day 0, 1 and 2 and identified 49 patients (8%), 93 patients (15%) and 142 patients (23%) with hypophosphatemia.

With lower intensity CRRT, there were 23 episodes of hypophosphatemia/1000 patient days, compared with 83 episodes/1000 patient days with higher intensity CRRT ($P < 0.01$). On multivariable logistic regression analysis, higher intensity CRRT and hypokalemia were independently associated with an increased odds ratio (OR) for hypophosphatemia. On multivariable models, when analysis was confined to patients alive at 48 hours, hypophosphatemia was not independently associated with clinical outcomes.

Conclusions

Hypophosphatemia is common during CRRT and its incidence increases with greater CRRT intensity. Hypophosphatemia may be not a independent predictor of mortality.

