

Abstract Submission No. : IL-9070

Management of acid-base disorders with CRRT

Hye Ryoun Jang
Samsung Medical Center, Korea, Republic of

Metabolic acidosis is the most common acid-base disorder in critically ill patients with acute kidney injury (AKI) and severe metabolic acidosis is an important indication of continuous renal replacement therapy (CRRT). Timely initiation of CRRT is critical for improving overall patient outcome as severe metabolic acidosis aggravates hemodynamic instability through myocardial depression. CRRT dose should be titrated considering serial changes of HCO₃⁻, blood urea nitrogen, and serum electrolytes (especially potassium and phosphorus). Additional bicarbonate infusion with a separate line can be considered in severe metabolic acidosis unresponsive to CRRT. Although sodium bicarbonate solution can be added to dialysate / replacement fluids, caution is required since this method may alter the electrolyte composition, especially increasing sodium concentration. Management of metabolic acidosis is still an important issue in patients discontinuing CRRT. Metabolic acidosis can be aggravated again after discontinuing CRRT unless dietary composition or fluid therapy are adequately adjusted to the patient's renal capacity and metabolic demand. Significant metabolic alkalosis is rare in critically ill patients with AKI. During CRRT, metabolic alkalosis can be managed with decreasing CRRT dose, increasing amino acids in diet or fluid, and administration of 0.9% saline. Manipulation of citrate infusion is not feasible in Korea. In this session, practical management of metabolic acid-base disorders with CRRT will be discussed.