

Utilization of Continuous Renal Replacement Therapies in 3 dogs

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The primary indication for hemodialysis is renal failure and because of the complications and cost of dialysis, most candidates have acute disease rather than chronic failure. Other indications for hemodialysis include severe acute hypernatremia, and some toxicities.

This study evaluated the effect of short-term continuous renal replacement therapies (CRRT) for 1) one acute oliguric renal failure dog, 2) one generalized lymphoma patient affecting bilateral kidney with severe uremia and 3) one acute severe hypernatremia with renal failure dog.

These patients were treated with CRRT using the PRASMATMsystem, M10 pre set or M60 pre set filter, Hemosol LG-2 lactate-based solutions (Hospal-Gambro). A short-term catheter (silicon-based, dual-lumen) with a Dacron-cuff was inserted into the Jugular vein. The distal tip of catheter was advanced to the level of the right atrium. Initial treatment was 4~10 hours with an average blood flow of 10~100 ml/min. During the CRRT, blood samples were collected and measured for CBC, serum chemistry and venous blood gas analysis parameters. Blood pressure, temperature, pulse, respiratory rates were also monitored.

Two to three times hemodialysis performed depending patients' condition throughout 24 to 62 hours. No significant complication related with hemodialysis was noted in all cases. The prognosis was good for the case 1 and 2 though the azotemia were not fully corrected. On the other hand, the azotemia and electrolyte imbalance corrected to normal range in the case 3 which euthanized 8 hours after hemodialysis due to the dog could not recovered from coma status.

CRRT demonstrate significant promise in the treatment uremia or acute electrolyte imbalances with minimal complication.

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