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Updates on Current Ongoing Clinical Trials in CRRT

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There are a number of ongoing studies of CRRT that we will review in this lecture. First, with regards to modality, there have not been any recent clinical trials comparing intermittent hemodialysis to CRRT. The ICRAKI (NCT06032884) trial is a 1000-subject non-inferiority trial that will compare intermittent hemodialysis to CRRT in patients with AKI who are critically ill and receiving mechanical ventilation or vasopressor support. With regards to dialysis dose, although the landmark ATN and RENAL trials established that there is no mortality benefit to high dose CRRT, the impact of lower dose CRRT on outcomes is unknown. In the Ketzerei trial (NCT06021288) the investigators hypothesize that lower-dose CRRT may lead to "controlled azotemia" which may be associated with more rapid renal recovery. It is unknown how quickly fluid can be removed from critically ill patients on CRRT; the RELIEVE-AKI (NCT05306964) trial is a stepped-wedge, cluster randomized trial that is testing the feasibility of restrictive and liberal fluid removal strategies. There is also significant interest in how to "wean" patients from CRRT – the PAUSE-CRRT trial (NCT06229990) is a small pilot trial that incorporates the furosemide stress test as a potential tool to determine when patients can come off CRRT. With regards to anticoagulation strategies, regional citrate anticoagulation is a common strategy used with CRRT. The Ca-CIBLE study (NCT05814341) is testing the impact of a higher post-filter ionized calcium (which limits citrate exposure) on the incidence of filter clotting.

Keywords: acute kidney injury , continuous renal replacement therapy, intermittent hemodialysis, citrate, dose