

Regional citrate anti-coagulation in CRRT: The new standard?

Continuous renal replacement therapy (CRRT) is the preferred renal replacement therapy for critically ill patients with acute kidney injury (AKI). Effective anticoagulation of the extracorporeal circuit is mandatory to reduce downtime and to deliver an effective dialysis dose. Worldwide, the most frequently used anticoagulant is systemic heparin. Unfortunately, in many patients this yields insufficient filter lifetimes and increases bleeding risk. Recently, regional citrate anticoagulation (RCA) has been introduced. RCA achieves effective anticoagulation by reducing the levels of ionized calcium in the extracorporeal circuit without affecting the systemic coagulation system. Today, a large number of studies and two recent meta-analyses show that RCA compared to any systemic anticoagulation provides significantly longer filter lifetimes, decreases risk of bleeding and transfusions, and also reduces workload for staff. Thus, RCA is recommended in actual guidelines and certainly will become the anticoagulation of choice for CRRT in the future.