

Supplementary Tables

Table 1 Flow rate of calcium drip based on ionized calcium level

Patient ionized calcium	Starting Calcium drip
Less than 0.9 mmol/L	10 ml of 10% calcium chloride over 30 mins before starting CRRT and then calcium drip at 15ml/hr
0.9 - 1.1 mmol/L	12.5ml/hr
Greater than 1.1 mmol/L	10ml/hr

Table 2 Timings of the filter ionized calcium and patient ionized calcium checks

Parameter	Initial check	Follow-up
Filter ionized Ca – ABG from blue port on circuit Target 0.25 to 0.35 mmol/L	Every two hours until stable (no further correction needed)	Every 6 hour
Patient ionized Ca – ABG from arterial line Target 0.9 to 1.1 mmol/L	Every two hours until stable (no further correction needed)	Every 6 hour
Serum calcium	After 6 hours	Daily
Total Calcium to patient Ca ratio Target ratio <2.4 (Ca mmol/l = Ca (mg/dl) x 0.2495)	After 6 hours	Daily

Table 3 Titration of citrate dose and calcium compensation based on filter ionized calcium

Parameter	Filter Ionized Ca >0.35	Filter Ionized Ca 0.25-0.35	Filter Ionized Ca <0.25
Patient Ca < 0.9	Citrate dose increased by 0.5mmol/L and Calcium compensation increased by increased by 2.5 ml/hr	Calcium compensation increased by 2.5 ml/hr	Citrate dose decreased by 0.5 mmol/L and Calcium compensation increased by increased by 2.5 ml/hr

Patient Ionized Ca 0.9 – 1.1	Citrate dose increased by 0.5 mmol/L	Normal ideal value	Citrate dose decreased by 0.5 mmol/L
Patient Ionized Ca > 1.1	Citrate dose increased by 0.5 mmol/L AND Calcium compensation decreased by 2.5 ml/hr	Calcium compensation decreased by 2.5 ml/hr	Citrate dose decreased by 0.5 mmol/L AND Calcium compensation decreased by 2.5 ml/hr

Table 4 Titration of heparin dose based on aPTT and aPTT ratio

aPTT (seconds)	aPTT ratio	Heparin dose
<35	<1.2	80 IU/kg bolus dose and maintenance dose increased by 4 IU/kg
35-45	1.2-1.5	40 IU/kg bolus dose and maintenance dose increased by 2 IU/kg
46-70	1.5-2.3	No dose modifications
>70	>2.3	Maintenance dose decreased by 5 IU/kg/hr

Table 5 Modulation of therapy based on total calcium to ionized calcium ratio

Ratio	Action
<2.4	Ratio checked daily
>2.4	<p>Citrate stopped for 20 minutes and restarted afterwards with 0.5 mmol/L less than the previous citrate dose.</p> <p>Calcium compensation unchanged.</p> <p>This would result in slightly higher filter ionized calcium. (0.35 to 0.45 acceptable)</p> <p>If ratio remained above 2.4 despite filter ionized calcium of 0.35 – 0.45 mmol/L, we considered:</p> <ol style="list-style-type: none"> 1. Doubling baseline dialysate flow (to increase citrate clearance) 2. Reducing blood pump speed (to reduce total administered citrate dose) 3. Stopping citrate and using an alternative anticoagulant (or no anticoagulant)

Table 6 Patient outcomes in group 1 and 2

Characteristic	Group 1	Group 2	p value
	Mean±SD	Mean±SD	
ICU stay (days)	6.12 ± 1.72	6.07 ± 2.05	0.923
Duration on RRT (days)	8.47 ± 1.03	8.72 ± 0.60	0.283
Filtration fraction (%)	14.18 ± 9.46	12.74 ± 7.63	0.536