

# CRRT Low Concentrations 18/0 Citrate Solution Infusion – Protocol

Medical Advisory Committee Approved: 25JUN2019

□ Harmonized

A printed copy of this document may not reflect the current, electronic version on Lakeridge Health's Intranet, 'The Wave.' Any copies of this document appearing in paper form should ALWAYS be checked against the electronic version prior to use.

#### Authorized to

 Critical Care Nurses trained in Continuous Renal Replacement Therapy (CRRT) at Lakeridge Health.

## **Patient Population Description**

 Critical care patients receiving CRRT using the PrismOCAL B22 or PrismOCAL Solution as dialysate and the CRRT Using Low Concentration 18/0 Citrate Solution and The Prismaflex System Order Set.

## **Contraindications to Implementing the Protocol**

- Patients less than 16 years of age
- · Patient unwilling or unable to provide a blood sample for bedside or laboratory testing
- Refusal of patient/family consent for treatment; notify Most Responsible Practitioner (MRP) immediately

## **Protocol Description**

Upon receipt of an order for CRRT Low Concentration 18/0 Citrate Solution Infusion Protocol the authorized implementer will:

- Administer low concentration 18/0 citrate solution via pre blood pump on Primaflex machine
- Draw initial post-filter ionized calcium (blue port; iCa-FilterCRRT) 1 hour after start of infusion and follow the nomogram in <u>Table 1</u>
- If CRRT Blood Flow Rate (BFR) is changed, recheck Post-Filter ionized calcium (blue port; iCa-FilterCRRT) 1 hour after the BFR change and follow nomogram
- Notify Nephrologist if target citrate concentration greater than 4.5 mmol/L
- Repeat post-filter ionized calcium (blue port) and patient's ionized calcium (from arterial line or peripheral venous sample) every 1 hour until there are no CRRT fluid flow rate (calcium chloride infusion rate, low dose citrate infusion rate, blood flow rate, dialysate flow rate or replacement solution flow rate) changes for 2 consecutive hours. If there are no CRRT fluids flow rate changes for 2 consecutive hours, repeat this lab work q6H (can coordinate timing with usual q12H CRRT bloodwork). If there are no CRRT fluid flow rate changes for 24 consecutive hours, repeat this lab work q12H (can coordinate timing with usual q12H CRRT bloodwork).

Document Sponsor/Owner Group: (Critical Care, Date Approved DDMONYYYY)

This material has been prepared solely for the use at Lakeridge Health. Lakeridge Health accepts no responsibility for use of this material by any person or organization not associated with Lakeridge Health. No part of this document may be reproduced in any form for publication without the permission of Lakeridge Health.

Lakeridge Health Page 1 of 2



# CRRT Low Concentrations 18/0 Citrate Solution Infusion – Protocol

# **Medical Advisory Committee Approved: 25JUN2019**

**Table 1:** Nomogram to maintain post-filter ionized calcium (blue port) between 0.25-0.45 mmol/L

Post-Filter Ionized Ca++	Target Citrate Concentration	Repeat Post-Filter
	Change	Ionized Ca++
Less than 0.15 mmol/L	Decrease by 0.3 mmol/L and	In 1 hour
	check the system for set-up flaws	
0.15 – 0.19 mmol/L	<b>De</b> crease by 0.2 mmol/L	In 1 hour
0.20 – 0.24 mmol/L	<b>De</b> crease by 0.1 mmol/L	In 1 hour
0.25 - 0.45 mmol/L	No change	
0.46 - 0.50 mmol/L	Increase by 0.1 mmol/L	In 1 hour
0.51 - 0.55 mmol/L	Increase by 0.2 mmol/L	In 1 hour
Greater than 0.55 mmol/L	Increase by 0.3 mmol/L and	In 1 hour
	check the system for set-up flaws	

### **Review/Evaluation Process**

Every 2 years

#### **Related Documents**

- CRRT Calcium Chloride Solution Infusion Protocol
- CRRT Magnesium Protocol
- CRRT Using Low Concentration 18/0 Citrate Solution and The Prismaflex System Order Set

Lakeridge Health Page 2 of 2