

Citrate anticoagulation for CRRT in a paediatric patient with SARS-CoV-2 - A case report

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Introduction

Severe Acute Respiratory Syndrome Coronavirus 2 (SARS-CoV-2) has spread rapidly across the world in the last few years causing extreme illness and fatality in the adult population. A large portion of the adults who needed intensive care also required continuous renal replacement therapy (CRRT) for acute kidney injury (AKI);

this was complicated by the procoagulation state that presented with SARS-CoV-2. However this trend towards AKI and CRRT has been less prominent in the paediatric population admitted to critical with acute SARS-CoV-2.



Patient history

- 13yr old patient with pre-existing stage 5 chronic kidney disease
- No requirement for renal replacement therapy pre admission
- Admitted to PCCU with acute SARS-CoV-2 pneumonitis.
- On admission patient was intubated and ventilated for respiratory support

Kidney function then deteriorated further with increasing urea and creatinine levels and decreasing urine output. Decision was made to initiate CVVHDF with regional citrate anticoagulation (RCA) using the Baxter Prismaflex machine. The regional paediatric RCA prescription was used.



CRRT (CVVHDF)

- 1st session = 45 hours, electively discontinued
- 2nd session = 61 hours, electively discontinued

Both sessions lasted longer than the 2021 average circuit life for NUH in 2021 which was 35 hours.

Treatments ran smoothly with no major complications; both circuits were electively discontinued with no evidence of clotting. Kidney function returned to pre SARS-CoV-2 levels and no further renal replacement was necessary.

In conclusion CRRT with RCA seems to be a safe and effective treatment for paediatric patients with SAR-CoV-2 related AKI.

