

# AKI in COVID-19

Westchester Medical Center Experience

April 24, 2020



- Between early March and mid-April, approximately 950 patients with suspected or confirmed COVID-19 were admitted to Westchester Medical Center.
- Of 356 Discharged patients with CONFIRMED COVID-19: PRELIMINARY DATA through 4/20/20
  - Survival rate about 80% ; 46% of deaths were over age 75; 39% female, 61% male
  - Among the discharged patients 23.5% required ICU care
  - 80% of those ICU patients were intubated
  - Of intubated patients about 20% successfully discharged home, thus far
  - AKI common in ICU patients – especially among intubated patients. 50% ( plus) range

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- Approximately 50-55 patients at any point in time required simultaneous RRT.
  - ICU population was about 95 -105 most days.
- About 20 patients were typically maintained on CVVHD-choice largely based on hemodynamic instability and staffing availability (CRRT initiated by hemodialysis staff; maintained by ICU). Average age 60.6; 82% male.
- Under normal circumstances typical dialysate use is approximately 50 L a day per patient
- Dialysis prescription changed to mix of CVVHDF and CVVHD due to fluid shortages.
  - Prescription changed to 1-1.5 L/h of dialysate and 500 cc/h of convective clearance using Plasma-Lyte, NS, or Lactated Ringers depending on patient's pH and fluid availability.
  - If potassium under 4.5 Ringer's Lactate used; if potassium over 4.5 bicarb or saline used depending upon the pH.
  - Typically if pH under 7.30-7.35 used bicarbonate based (D<sub>5</sub>W or 0.45NS and bicarb) with bicarbonate adjusted based on pH.
  - Total CVVHD Clearance typically maintained at 20-25 ml/kg/hr.

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- Hyperkalemia routinely present, related to marked shortage of K2 dialysate and catabolic state-majority of patients received binders including sodium zirconium, and occasionally kayexalate; bicarbonate drip, insulin and D50 routinely utilized.
- System clotting was a major issue most patients were maintained on full dose heparin anticoagulation. Argatroban used if HIT suspected.
- Remaining patients maintained on routine hemodialysis - times typically 2-1/2-3 hours due to patient volume and staff availability.
- Fluid clearance took precedence over solute clearance-typical BUNs about 30-50 points higher than routine HD patients.