



# ACUTE KIDNEY INJURY IN CRITICALLY ILL PATIENTS WITH COVID-19: OUR EXPERIENCE. PRELIMINARY RESULTS



C.N.J. Colombo<sup>a</sup>, A. Guglielmi<sup>a</sup>, F. Colombo<sup>a</sup>, G. Testa<sup>b</sup>, M. Gregorini<sup>c</sup>, T. Rampino<sup>c</sup>, C. Ronco<sup>d</sup>, G. Tavazzi<sup>a</sup>, F. Mojoli<sup>a,b</sup>, F. Ferrari<sup>e,f</sup>.

<sup>a</sup> University of Pavia, Department of Clinical, Surgical, Diagnostic and Pediatric Sciences, Pavia, Italy; <sup>b</sup> Pediatric Clinic, I.R.C.C.S. San Matteo Hospital and University of Pavia, Italy; <sup>c</sup> Department of Nephrology Dialysis & Transplant, I.R.C.C.S. San Matteo Hospital and University of Pavia, Italy; <sup>d</sup> Full Professor of Nephrology - University of Padova; Director of Department Nephrology Dialysis & Transplant-AUSSL 8 regione Veneto -San Bortolo Hospital Vicenza - Italy; <sup>e</sup> International Renal Research Institute of Vicenza (IRRV), San Bortolo Hospital - Vicenza, Italy. and University of Padua - Padua, Italy; <sup>f</sup> Department of Anaesthesia and Intensive Care Unit, I.R.C.C.S. San Matteo Hospital and University of Pavia, Italy.

\*Costanza Natalia Julia Colombo: [costanzanatali.colombo01@universitadipavia.it](mailto:costanzanatali.colombo01@universitadipavia.it)

**Background:** Patients with severe forms of COVID-19 may develop multiple organ dysfunction syndrome, including Acute Kidney Injury (AKI). We report the cumulative incidence, risk factors, associations and outcomes of AKI and renal replacement therapy (RRT) in critically ill COVID-19 patients.

**Methods:** We performed a retrospective cohort study of adult patients with COVID-19 diagnosis admitted to the intensive care unit (ICU) between February 21st and April 26th, 2020. The primary outcome was to evaluate the AKI cumulative incidence in our population. Multivariable Logistic Regression Analysis was applied to identify risk factors for the development of AKI.

**Results:** 45 (53%) patients developed AKI any stage by seven days from the ICU admission and 42 (93.3%) received RRT. AKI categorised by KDIGO stage are showed in Table 1. AKI patients were slightly older than no AKI patients, but gender, comorbidities were equally distributed in the groups. At the ICU discharge, 22 (27%) were classified as AKD and 7 (17%) as AKI patients. All these patients needed still CRRT (dialysis dependence). In-hospital mortality was higher in AKI patients compared to no AKI patients (27 (60%) AKI patients vs 15 (37%) no AKI patients  $p = 0.038$ ). In multivariate analysis lopinavir/ritonavir administration was the main risk factor associated with the AKI development (OR 7.59 95% CI 1.51-38.0,  $p=0.014$ ).

**Conclusions:** AKI was common among critically ill COVID-19 patients occurred in lightly older patient. In our population, gender did not affect AKI occurrence. Most AKI patient needed RRT (42 (93%) and at ICU discharge 27% showed AKD and 17% RRT dependence.

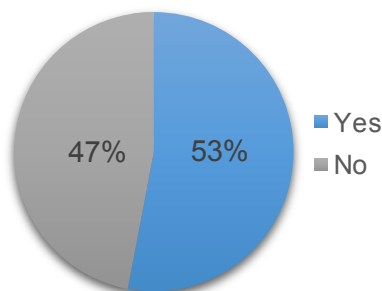


Figure 1 - AKI prevalence in COVID-19 positive patients.

AKI stage	Freq (N)	Perc (%)
0	40	47
1	18	21
2	3	4
3	24	28
Tot	85	100

Table 1 - AKI according to KDIGO stage.

38<sup>th</sup> Vicenza Course on AKI&CRRT  
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