Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Results: A total of 76 patients were admitted during the study period. 74 were included in the study (Figure 1). The average age of the patients was 55.6 ± 13.8 years. 78.4% of the patients were male. 34 (45.9%) of 74 patients developed AKI. Out of them 47.1% had stage 1 AKI, 17.6% had stage 2 AKI, 11.8% had stage 3 AKI and 23.5 % had stage 3 AKI requiring dialysis.

When the baseline characteristics were compared between those who developed AKI versus those who did not develop AKI, the former had more co-morbidities as indicated by higher Charlson co-morbidity index (CCI score) p=0.001, higher proportion of diabetes mellitus (p=0.01) and pre-existing chronic kidney disease (CKD) (p= 0.04).

The patients who developed AKI had more severe illness with 41.1% of them requiring non-invasive ventilation (NIV) and 44.1% mechanical ventilation (p= 0.001 and p= 0.04 respectively). 50% of patients who developed AKI required inotropic support as compared to 20% of those without AKI (p=0.007). Serum lactate dehydrogenase (LDH) and serum ferritin were significantly elevated in patients who developed AKI as compared to those who did not develop AKI (Figure 2).

On stepwise multivariate regression analysis, presence of diabetes mellitus (OR (95% CI): 6.8 (1.50-30.96), p=0.013), serum LDH >/= 386 (OR (95% CI): 12.38 (1.66-92.46) p= 0.014, serum ferritin >/=835 (OR (95% CI): 3.84 (0.86-17.14) p=0.07 and delay from symptom onset to admission in days (OR (95% CI): 3.55 (0.89-14.15), p=0.07 were independent risk factors for development of AKI in our study population.

The overall mortality rate of the study population was high at 56.7%, with 64.7% in the AKI group and 50% in the non- AKI group (p=0.20)

Fig 1: Details of study population

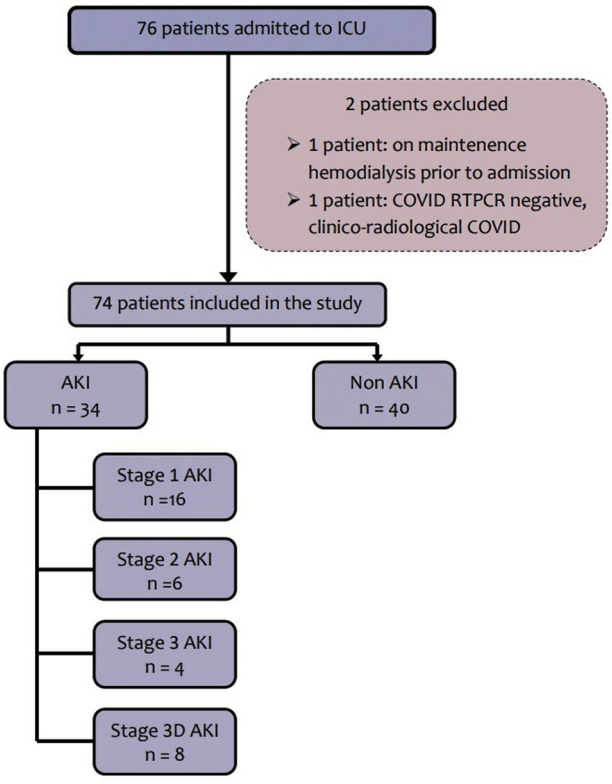
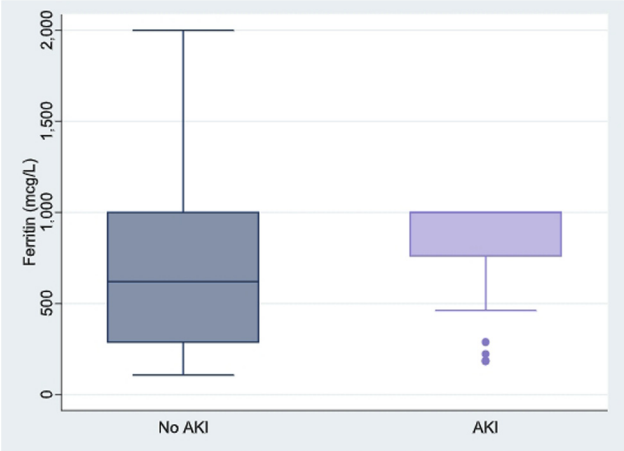
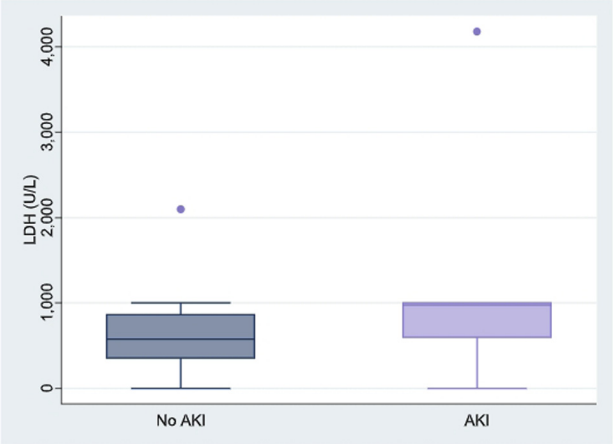


Fig 2: Box and whisker plots of serum LDH and serum ferritin in those with AKI and those without AKI





Conclusions: There is high incidence of AKI in critically ill patients of COVID-19 admitted to ICU. Diabetes mellitus, high serum LDH and serum ferritin were found to be independent predictors for AKI development.

No conflict of interest

POS-030

CLINICAL PROFILE AND OUTCOMES IN CHRONIC KIDNEY DISEASE STAGE 5 PATIENTS ON DIALYSIS HOSPITALIZED WITH COVID-19 INFECTION

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Introduction: The CKD5D patients with reduction in kidney function are vulnerable to COVID-19–related critical illness, marked by multisystem organ failure, thrombosis, and a heightened inflammatory response. Understanding the outcomes of COVID-19–infected patients with and without ESRD is important because this information would help risk-stratify patients with ESRD to certain therapies for COVID-19 as they arrive at the hospital.

Methods: This prospective observational study enrolled first thirty CKD5D patients hospitalised with COVID-19 infection and

compared their clinico-laboratory profile and outcomes in terms of mortality or discharge or time to COVID negative, with thirty non-CKD patients with COVID-19 infection admitted at our hospital.

Results: Total of sixty COVID-19 infected patients were analysed, thirty with CKD5D status and thirty were non-CKD patients. The mean age was lesser among CKD5D patients (50.70 years). The most common comorbidity was hypertension (83.33% in CKD5D patients and 70% in non-CKD group) followed by diabetes mellitus (70% in CKD5D patients and 50% in non-CKD patients) in both the groups. There was no significant difference between the two groups based on the comorbidity profile. The proportion of patients with CKD 5D having dysgeusia (60% vs 16.67%) and anosmia (53.33% vs 16.67%) was significantly higher compared to the non-CKD group of patients. The most common symptom being cough in both the CKD 5D (73.33%) and non-CKD (83.33%) group. The proportion of patients with moderate disease was significantly higher in the CKD patients (50% vs 10%). There was no significant difference in terms of Neutrophil-Lymphocyte ratio. The mean levels of serum ferritin and D dimer were slightly higher for the non-CKD group whereas the average IL-6 levels were higher for the CKD 5D groups of patients (329.7 pg/ml vs 30.74 pg/ml in non-CKD patients). Mortality was higher in the CKD 5D group (33.33% in CKD5D vs 23.33% in non-CKD, p=0.3940). The higher proportion of patients were discharged without deterioration in the non-CKD group (66.67% vs 53.33% in CKD5D, p= 0.2957). The mean duration to discharge or death was significantly higher for the CKD 5D group (27.10 days vs 16.20 days, P=0.0004) with a higher duration of hospital stay for the CKD 5D patients ranging from 8 to 58 days. The CKD5D patients needed 26±11.14 days to turn COVID negative and recover, significantly higher than 15.39±7.79 days among non-CKD patients. Among CKD5D patients, the higher IL-6 and D-dimer levels were associated with increased severity of COVID-19. The CKD 5D patients with higher D-dimer levels (977.5 vs 574.5 ng/ml, P<0.01) required critical care with ICU stay and higher support of ventilations. A higher IL-6 (894.27 vs 47.41pg/ml, P=0.0214), NL ratio (12.35 vs 5.03, P=0.0013) and lower lymphocyte count (9.70/uL vs 19.50/uL) was significantly associated with increased mortality when compared to those recovered.

Conclusions: The CKD stage 5 patients on dialysis took significantly longer time to clear SARS-Cov-2 with a mean of 26 days. Mortality was particularly high in CKD 5D patients with severe COVID-19. Among the hospitalised COVID-19 patients, the CKD 5D status had higher adjusted odds ratio (aOR) for mortality of 3.3; 3.2 and 7.19 when adjusted for age and gender; age and comorbidities (hypertension and diabetes mellitus) and age, biochemical and inflammatory markers respectively.

No conflict of interest

POS-031

RENAL HISTOMORPHOLOGY IN COVID AUTOPSIES - AN INSTITUTIONAL EXPERIENCE

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Introduction: COVID 19 is caused by severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) and clinical manifestations varied from asymptomatic to severe illness leading to death. Acute kidney injury was one of the presenting features and was documented in most patients during hospitalization. Renal histomorphology reported in these cases ranged from ATI, pigment cast nephropathy to collapsing glomerulopathy. The COVID-19 autopsies in developing countries were finite due to limited infrastructure for highly infectious autopsies and cultural barriers. The reported cases were limited and based on post mortem biopsies. We undertook this study to describe renal histomorphological changes in the complete COVID-19 autopsies performed in our institute.

Methods: We retrospectively evaluated renal histomorphology of COVID-19 positive patients admitted in PGIMER Chandigarh, India. These cases were COVID-19 negative at the time of autopsy. The light microscopic findings in kidney sections of six autopsy cases and one post mortem biopsy were evaluated. Immunofluorescence and electron microscopy were also performed.

Results: A total of seven cases; 6 complete autopsies and one post mortem kidney biopsy were examined grossly and microscopically. The age ranged from 28-68 years with a mean of 46 years. Male-female ratio was 6:1. Four patients had comorbidities of which one patient had systemic lupus erythematosus (SLE) and three had type II diabetes mellitus. SLE patient had lupus nephritis, however, the diabetes mellitus cases did not have any renal related clinical manifestations prior to COVID-19 infection. In case # 1 after COVID-19 infection, there was upscaling of lupus nephritis from class III to IV. Mesangiolysis was present in two patients (lupus nephritis-1, diabetes mellitus-1). Two cases showed myoglobin pigment casts and one case showed mucormycosis. All cases had moderate to severe ATI with recognizable etiology in 5 cases. In one case it is due to mucormycosis, in 2 cases each it was observed due to myoglobin cast and mesangiolysis. There was no evidence of collapsing glomerulopathy in our series. RTPCR for COVID-19 and IHC were negative in kidney tissues in all the autopsy cases.

Cases	Age/Sex	Prior comorbities	Renal histomorphology at autopsy	RTPCR from kidney	Duration of stay in hospital in days
Case 1	28/F	Systemic lupus erythematosus with lupus nephritis class III, tuberculosis, idiopathic thrombocytopenic purpura	Lupus nephritis with Class IV+V with mesangiolysis (progression from class III after COVID-19), activity score: 12/24, chronicity score: 4/12, moderate acute tubular injury	Negative	9
Case 2	58/M	Type II diabetes mellitus	Mesangiolysis with severe acute tubular injury and myoglobin pigment cast	Negative	29
Case 3	45/M	None prior. Found to have triple vessel coronary artery disease on autopsy	Moderate acute tubular injury with myoglobin pigment cast	Negative	07
Case 4	53/M	Type II diabetes mellitus	Severe acute tubular injury	Negative	17
Case 5	68/M	Type II diabetes mellitus, hypertension, coronary artery disease	Class III diabetes mellitus, severe acute tubular injury and moderate arteriosclerosis	Negative	01
Case 6	32/M	None	Severe acute tubular injury	Negative	46
Case 7	38/M	None	Acute cortical necrosis with Mucormycosis		08