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.

COVID 19. It is thought that the main causes of kidney injury by the virus involve the inflammatory process. (1) However, in some cases kidney injury can be explained by other causes; there are some case reports of antineutrophil cytoplasmic antibodies**ANCA-associated vasculitis** due to COVID-19.(2)

Methods: **Methods:** A 60 year old male, with 5 year history of arterial hypertension with normal kidney function. Without SARS-CoV-2 vaccination. He began his condition with creatinine elevation during hospitalization for severe pneumonia due to COVID-19, In the admission laboratories, a creatinine of 5.9mg/dl and microhematuria (5-10 RBC/field) was shown. Renal ultrasound was performed with ruled out structural alterations. Patient receive management treatment for pneumonia due to COVID 19 with steroid methylprednisolone and enoxaparin. After 7 days of hospitalization the patient was discharged with a creatinine of 3.5 mg/dl. Creatinine value 2 months after hospitalization was 2.7 mg/dl. In the third month, the patient had symptoms and laboratory findings of rapidly progressive glomerulonephritis; he had a sudden elevation of creatinine to 11.6 mg/dl, BUN 89.2 mg/dl, and urinalysis with 100 mg/dl of proteins, hemoglobinuria, red cells >100/field. Urinary casts were not found CRP 41.6 and ESR 63. The urinary protein-to-creatinine ratio of 1880 mg/g and aleatory urine creatinine of 84 mg/dl.In serum protein electrophoresis there was no evidence of monoclonal peak . Non-Reactive HCV antibodies and HBV surface antigen, HIV test negative. Positive IgG Antibodies to SARS-CoV-2 and IgM negative. Complement C3 1.039 g/L (0.900-1800 g/l), C4 0.285 g/L (0.100-0.400 g/L). Antinuclear antibodies (ANA) and anti-glomerular basement membrane (anti-GBM) IgG antibodies were negative. ANCA panel with total positive antibodies (1:160) with perinuclear pattern and positive myeloperoxidase (MPO) Antibodies (>8.0). Subsequently, a renal biopsy was performed, which reported: Interstitium with scarce global fibrosis of 20%, inflammatory cells (mononuclear and polymorphonuclear) with tubular involvement, and small-caliber vessels with a severe infiltrate. Tubular atrophy and glomeruli have 60% fibrous crescents and 40% cellular crescents (figure 1).

Results: Diagnostic impression: MPO-ANCA associated-vasculitis with renal involvement by COVID 19.Treatment was started with Rituximab and methylprednisolone as induction. Renal function improved; however, it did not reach its baseline function.

Conclusions: **CONCLUSIONS:** Few cases of ANCA- associated vasculitis after COVID 19 pneumonia have been described, both MPO-ANCA and PR3-ANCA. This association remains without a concrete explanation (4) To this day no more than 3 cases of MPO-ANCA associated vasculitis due to COVID 19 have been reported. In most cases, reported MPO-ANCA associated vasculitis required renal replacement therapy compared to PR3-ANCA associated vasculitis (5). In our patient, with the data of acute kidney injury and microhematuria during his hospitalization for pneumonia due to COVID 19, it is important to consider that prolonged treatment with steroids may have masked this condition, having its clinical presentation in the following months.

No conflict of interest

POS-852

HEALTH CARE WORKERS WITH LONG COVID SYMPTOMS: A RETROSPECTIVE OBSERVATIONAL STUDY, NEPHROLOGY DEPARTMENT HOSPITAL KUALA LUMPUR

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Introduction: Health Care Workers (HCWs) as front-liners, are particularly vulnerable to contract Covid-19 infection. They have a increased 12-folds risk of contracting Covid-19 infection compared to the general population. While majority of infected individuals recover, a significant number of them, continue to exhibit symptoms beyond 3-4 weeks, the "long covid symptoms", after the acute illness. These "long covid symptoms" may affect their work performance after they recommence work.

Methods: This retrospective cohort study was conducted by collecting data from all HCWs in the Nephrology department, and those who contracted Covid-19 infection, from 1stJanuary 2020 to 31stJuly 2021, in Hospital Kuala Lumpur (HKL). Variables collected include demographic profiles, vaccination status and symptoms of "long Covid" with duration.

Results: A total of 294 HCWs in the department and 74 HCWs contracted Covid-19 infection during the period of study. Majority of infected HCWs were female (70.3%) and from age group of 18-39 years (81%). At 31stJuly 2021, total of 289 HCWS received full dose of covid vaccination (98%). However, among the 74 HCWs that contracted covid-19, 39 HCWs were fully vaccinated at the time of infection. The frequency of infected HCWs exhibited "long covid symptoms" was 51.4%. Using Pearson Chi-Square test analysis, only covid category (p =0.019) was found to be associated with "long covid symptoms", in which infected HCWs with higher category were more predisposed to suffer from "long covid symptoms". The most prevalent reported symptoms were fatigue (22.9%), followed by chest pain and palpitation (13.4%), cough and shortness of breath (12.7%), headache and dizziness (12.1%)

Conclusions: 25% of HCWs in the Nephrology department of HKL contracted Covid-19 infection during the period of study. More than 50% of infected HCWs actually suffered from "long covid symptoms". The severity of covid-19 infection (higher category) predicts the likelihood of developing "long covid symptoms". However, vaccination did not influent the likelihood of development of "long covid symptoms".

No conflict of interest

POS-853

AKI DUE TO COVID-19 DISEASE REQUIRING RENAL REPLACEMENT THERAPY: ROLE OF EXPANDED HAEMODIALISYS (HDX) ON INFLAMMATION AND OUTCOME

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Introduction: The first reports of COVID19 disease don't highlighted associated Acute Kidney Injury (AKI) but later there have been more evidence that viral load in the kidney it's secondary only to his tropism for the respiratory system yet the rate of AKI and the associated outcomes are not well understood. AKI often occur concurrently to respiratory failure; risk factors are: need for ventilation, vasopressor use and sepsis. Need for RRT ranging from 26 to 45 % and patients (pts) mechanically ventilated who received RRT had a poor prognosis: survival varies from 20 to 40 %. COVID19 pts have a hyper-inflammatory state and AKI is final common pathway of an increased immunologic response leading to systemic inflammation due to uncontrolled circulating levels of pro-inflammatory mediators and cytokine induced direct organ damage. HDx represents an innovative strategy able to remove inflammation soluble mediators. It's cause a markedly reduction of pro-inflammatory cytokines transcription induced by peripheral neutrophil activation with decrease of ROS, TNF-α and IL-6 production and increase of apoptosis. Aim of this study is to determine incidence and outcome of AKI in critically ill Covid19 pts and the role of HDx.

Methods: In a retrospective observational study, we evaluated development of AKI in 95 consecutive COVID19 pts admitted in the ICU of our COVID HOSPITAL from November 2020 to May 2021. All received mechanical ventilation. AKI pts requiring RRT, for logistical reasons were treated random with daily IRRT: HF-HD (3 pts-FX80, FMC) and HDx therapy (9 pts-THERANOVA 400, Baxter). Both treatments ranging from 1 to 5 sessions for each patient. They were daily assessed using the following: urea, creatinine, C-reactive protein (CRP), procalcitonin (PCT), D-Dimer. Need for vasopressor, BMI and outcome are also evaluated. The values have been reported as mean ±SD. AKI was defined according to KDIGO.

Results: Among the 95 pts the mean age was 70.4 ±16 years, 73 were male (76.8%). All were hypertensive, over 30% were obese, 20% with nephropathies, some with diabetes or COPD. AKI developed in 39 pts (41%) and 12 of them (30.7%), mostly obese, underwent IRRT by HDx: Qb=195 ±15.8 ml/m, TT 283.7 ±67.7 m' or HF-HD: Qb= 200 ±17 ml/m, TT 278 ±63 m'. HDx discovered a significant reduction for urea, CRP and PCT unlike HF-HD. (Tab. 1) Pts cardiovascular instability increased significantly with both types of treatments, in many cases causing their interruption even if treatments were long and with minimal hourly ultrafiltration. None of those undergoing haemodialysis survived; in

particular, obese had the worst intradialytic compliance and the shortest survival. Early onset RRT does not alleviate mortality.

Tab. 1

			HDx		HF-HD
			9 pts (average)		3 pts (average)
Urea mg/dl	Baseline		289.5 ± 98.8		292.5 ± 11.5
	After	p< 0.001	201.2 ± 67.7*		228 ± 77.5
Creat mg/dl	Baseline		3.5 ± 1		3 ± 0.6
	After		4.3 ± 0.8		3.7 ± 0.9
CRP mg/l	Baseline		181.1 ± 91.1		173.5 ± 33.5
	After	p < 0.05	109.8 ± 44*		207.5 ± 100.5
PCT ng/ml	Baseline		12.7 ± 10.9	p= ns	5.4 ± 3.1
	After	p < 0.02	3.8 ± 1.8*		3.3 ± 2.7
D-Dimer ng/ml	Baseline		5422.7 ± 2597.1		4528 ± 2211
	After		3977.8 ± 2729.7		3253 ± 2085
Noradrenaline mcg/m	Baseline		7.5 ± 3.1		7.2 ± 4.3
	After	p<0.002	13.5 ± 3.8*		12.8 ± 4
BMI kg/cm²			34.9 ± 9.4		35.2 ± 8.6

Conclusions: In our experience AKI complicated the course of more than 1 in 3 critically ill COVID19 pts: theirs risk for AKI was higher than the general ICU population. HDx had a significant impact on inflammation and renal markers, compared to HF-HD, for his increased clearance of cytokines. Unfortunately, COVID19 pts who received RRT had a poor prognosis, especially if obese and if requiring high doses of vasopressors, regardless hemodialysis techniques: intermittent or continuous, because its known that all are equally efficient. Since COVID-19 remains a threat to public health in the near future, hopefully further factors that may impact AKI and survival in these pts will be clarified.

No conflict of interest

POS-854

NEGATIVE ALACTIC VALUE IS REVERSED BY HEMOPERFUSION IN SEPTIC PATIENTS

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Introduction: Gattinoni et al. have recently introduced a new internal milieu parameter: the "alactic base excess" (ABE). This variable is obtained by applying the following equation: ABE mmol/L = standard base excess (SBE) mmol/L + lactate mmol/L, being standard base excess mmol/L = [bicarbonate mmol/L - 24.8 mmol/L] + 16.2 mmol/L x (pH - 7.4). In a clinical setting, a negative ABE value is directly related to fix acid retention, and is associated with higher mortality in septic patients. Hemoperfusion (HPF) is an extracorporeal technique which involves the passage of blood (or plasma) through an adsorption cartridge, where solutes are removed by direct binding to the sorbent material. Then, we decided to evaluate if HPF could modify negative ABE value in sepsis.
Methods: Basal values of ABE, SBE and lactate (mean, SD) were obtained. The difference between these parameters values before and after 4 HPF (HA330) sessions (delta value) was evaluated. Student and Wilcoxon tests were applied for data analyses
Results: From 32 patients (age: 57±13, male 69%) suffering from respiratory insufficiency secondary to COVID-19 (RIC) who were treated with HPF (HA330) in the critical care unit of Clinica de la Mujer, Bogotá (Colombia), 6 presented metabolic acidosis (pH:7.37±0.1, pCO2: 36±14 mmHg, bicarbonate:20.5±3 mmol/L) with negative ABE value (-2.7±1) composed by negative SBE (- 4.7±1) and high lactate serum value (2±0.7 mmol/L). Delta ABE, SBE and lactate were: 7.7 (p:0.005), 6.1 (p:0.003) and 1.6 (p:NS), respectively. Thus, negative ABE was significantly reversed by HPF, due to SBE positivization without significant change in lactate.
Conclusions: Negative alactic parameter was significantly reversed by HPF in septic patients.

No conflict of interest

POS-855

MORTALITY RATE AND ACUTE KIDNEY INJURY PREVALENCE REDUCTION IN COVID-19 CRITICAL PATIENTS TREATED WITH HEMOPERFUSION

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Introduction: COVID-19 induced damage is fundamentally reactive since is generated by a series of mediators released during inflammatory overreaction (cytokines storm). Hemoperfusion (HPF) is an extracorporeal technique which involves the passage of blood (or plasma) through an adsorption cartridge, where solutes are removed by direct binding to the sorbent material. HA330 cartridge can bind cytokines. Previous studies have proposed the utility of HPF with HA330 cartridge in reducing cytokines storm negative effects, even in COVID-19. Then, we decided to compare mortality rate, inflammatory response, and acute kidney injury (AKI) prevalence between critical patients suffering from respiratory insufficiency secondary to COVID-19 (RIC) who were treated with or without HPF-HA330.
Methods: Mortality rate, serum creatinine, and ferritin values were compared between a group of patients suffering from RIC who received conventional treatment support (Clínica de la Costa, Barranquilla.Colombia), and another group who additionally received 4 HPF-HA330 sessions. Student and Wilcoxon tests were applied for data analyses.
Results: From 116 patients, 57 years old (range: 47-71), male (65%) suffering from RIC, one group (n: 84) received conventional support treatment (Barranquilla), and the other group (n: 32) additionally received HPF-HA330 (Bogotá). Both groups had similar basal serum creatinine (0.9 mg/dl), and prevalence of hypertension (49%), diabetes mellitus (26%), chronic respiratory disease (12%) and cardiopathy (9%). HPF group had higher prevalence of obesity (72% vs 44%, p: 0.013), and mechanical ventilation (90% vs 48%, p:<0.001) than the non HPF group. Mortality rate (31% vs 61%, p: 0.008), highest serum creatinine (0.5 mg/dl vs 1.4 mg/dl,p:<0.001), and post-HPF ferritin (2868 vs 1675, p:<0.001) were significantly lower in HPF group.
Conclusions: Mortality rate, serum ferritin, and AKI were significantly reduced in critical COVID-19 patients who received HPF-HA330 than those who did not.

No conflict of interest

POS-856

COMPARISON OF OUTCOMES OF ACUTE KIDNEY INJURY IN COVID 19 PATIENTS BETWEEN FIRST WAVE AND SECOND WAVE IN A TERTIARY CARE CENTER

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Introduction: COVID-19 is an infectious disease caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). COVID-19 disease mainly affects the respiratory system, which in more severe cases is manifested by pneumonia, hypoxemia and acute respiratory distress syndrome. Although the main focus is on the pulmonary features, physicians must be aware of complications that SARS-CoV-2 infection carries to other organs, including the kidneys. Acute kidney injury (AKI) is the most common kidney manifestation among patients hospitalized with COVID-19. However, the epidemiology, management, and associated outcomes have varied greatly between studies. The goal of this retrospective study was to compare demographic data, clinical characteristics and clinical outcomes of individuals with SARS-CoV-2 infection between the first and second wave of the pandemic.
Methods: **Aim**: To evaluate the outcome of AKI in COVID-19 patients between first wave and second wave.
Patients and Methods:
Study design: Retrospective observational study.