



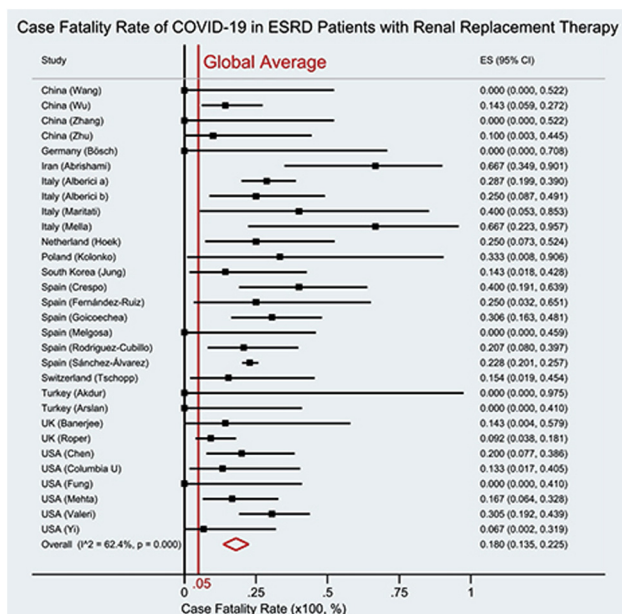
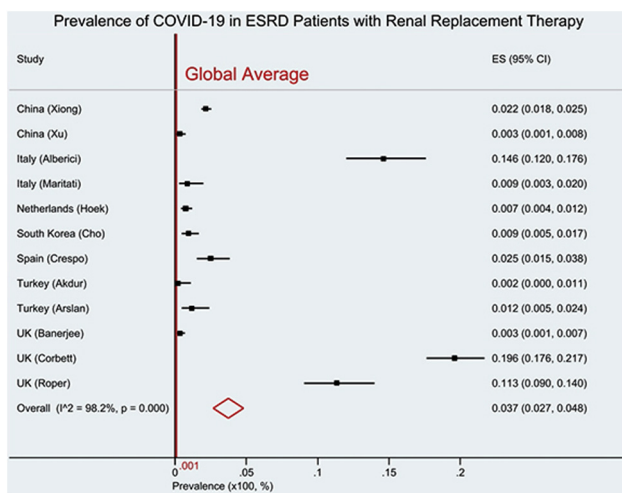
Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

systematic review to evaluate the prevalence and case fatality rate (CFR) of COVID-19 infection in ESRD patients with hemodialysis, peritoneal dialysis, and kidney transplantation.

Methods: Systematic search was conducted using PubMed, Embase, Scopus, Web of Science, and CENTRAL for observational studies of COVID-19 infection in ESRD patients with renal replacement therapy with prevalence or case fatality outcomes in the English language up to June 30, 2020. The meta-analysis was done using a random-effects model. Outcomes were prevalence and CFR with their estimated 95% confidence intervals. Also, global COVID-19 data were retrieved for estimating the prevalence and CFR of the general population as referencing points. (Prospero CRD42020199752)

Results: Of 3,272 potential studies, 34 were included in the meta-analysis (20,694 ESRD patients in 12 countries). Twelve studies (19,445 ESRD patients in seven countries) reported prevalence data whereas 30 studies (9,293 in 12 countries) had case-fatality data. The pooled prevalence of COVID-19 in ESRD patients with renal replacement therapy was 3.7% (95%CI 2.7–4.8%) which was significantly higher than the global average prevalence (0.1%, 95%CI 0.1–0.1%). The overall case fatality rate in ESRD patients with renal replacement therapy was 18.0% (95%CI 13.5 – 22.5%) which was significantly higher than the global average CFR (5.0%, 95%CI 5.0 – 5.0%).



Conclusions: The prevalence and case fatality rate of SARS-CoV-2 infection in ESRD patients with renal replacement therapy across the globe are significantly higher than the global averages.

No conflict of interest

POS-541

L COVID-19 INFECTION IN HEMODIALYSIS PATIENTS: EXPERIENCE OF NEPHROLOGY DEPARTEMENT CHU SAHLOUL



HADJ BRAHIM, M¹, Sahtout, W*¹, Guedri, Y¹, Fradi, A¹, Kallala, W², Dahmane, R¹, Boukadida, R¹, Azzabi, A¹, Mrabet, S¹, Kacem, S², Ben Aicha, N¹, Ben Amor, S¹, Zallema, D¹, Trabesi, A², Achour, A¹

¹Sahloul Hospital, Nephrology, Sousse, Tunisia, ²Sahloul Hospital, Virology, Sousse, Tunisia

Introduction: SARS-CoV-2 infection is challenging healthcare systems around the world. Hemodialysis (HD) patients are at increased risk for COVID-19 and its transmission due to difficulty maintaining physical distancing. There is a lack of evidence regarding the epidemiology of COVID-19 in maintenance HD patients. In this study, we describe our experience of covid 19 infection in our dialysis unit.

Methods: It is a retrospective, observational, single-center study including all positive patients managed at our COVID-19 hemodialysis unit in nephrology departement of Sousse from October 1st to November 23th, 2020 as confirmed by real-time polymerase chain reaction.

We collected the clinical characteristics, laboratory investigation, treatment and evolutionary profile of COVID-19 hemodialysis patient. **Results:** A total of 20 hemodialysis patients were enrolled in the study with a mean age of 56+/-12 years. there were 15 males and 5 females. The common comorbidities were hypertension and diabetes present respectively in 47.1% and 35.3% of cases. The diabetic nephropathy was the most frequent cause of end stage renal disease (ESRD). The mean time on dialysis therapy was of 83 months (8–288 months).

The most common symptom was fever (68.4%), followed by dry cough (57.9%) and dyspnea (42.1%). Three patients were asymptomatic. All COVID-19-infected patients had lymphopenia; lymphocyte level was less than 500/mm³ in 4 patients. Hyperleukocytosis was noted in only one patient. Mean hemoglobin level was 8.9+/-2g/dL. Thrombopenia was found in 4 patients. Eleven patients had elevated CRP; hepatic cytolysis has been noted in 6 patients. rhabdomyolysis has occurred in 2 cases.

At disease diagnosis, 7 of the 20 (35%) patients were managed on an out patient basis, whereas the remaining 13 (65%) required hospitalization because of hypoxia. Eight patients required intensive care unit (ICU) care. Choices regarding management strategy were made based on disease severity. 79% received double antibiotherapy and 60% curative anticoagulation. Dexamethasone was administered to 7 of 20 patients. All patients recieved vitaminotherapy. Ten patients required high oxygen flow CPAP – VNI, only one patient was intubated.

Six patients were discharged, and 7 patients died during hospitalisation, all due to respiratory failure.

Conclusions: The current outbreak of SARS-CoV-2 represents a special risk for patients with chronic kidney disease. Its severity is highly variable in hemodialysis patients.

It is essential to have an adequate training of all professional in the hemodialysis unit on the prevention and identification measures of COVID-19.

No conflict of interest

POS-542

THE EPIDEMIOLOGY AND OUTCOME OF COVID-19 AMONG MAINTENANCE HEMODIALYSIS PATIENTS: A RETROSPECTIVE STUDY FROM A DIALYSIS NETWORK IN INDIA



Sankarasubbaiyan, S*¹, Mallikarjun, G², Mohammed S, H², Sonawane, V², Kaparaboina K. K, K², Puvvada R, S³, Subramanian Ganapathi, V², Shah D, K²

¹Nephroplus, Nephrology, Chennai, India; ²Nephroplus, Quality, Hyderabad, India, ³Nephroplus, Quality, Hyderabad, India

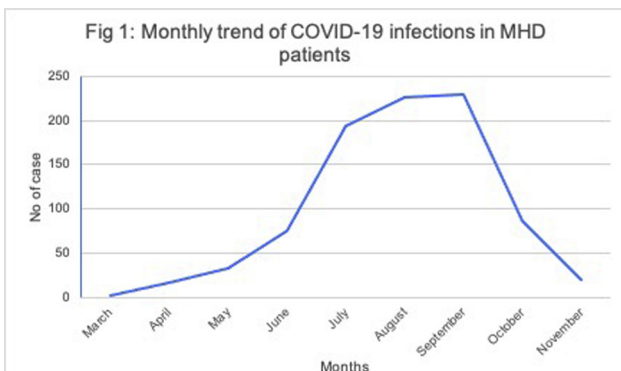
Introduction: COVID-19 is reported to have high morbidity and mortality in renal patients. In Indian hemodialysis patients, due to their high comorbidity burden and nature of care delivery in hospital based centres, the risk of transmission is high. The incidence of COVID varies based on health system practices, health seeking behaviour, reasons for testing, type of test used. The outcome is influenced by patient demographics, comorbidity, health system access, standard of care, cost of care and the type of payer system.

Methods: Objectives: 1.To study time trend, geographic distribution by zone, cities and centres of COVID-19 infection in HD patients , 2.To study age and gender distribution of COVID patients, 3.To study outcome of COVID-19 infection

Methods: From March 15, 2020 to November 15, 2020, consecutive MHD patients who acquired COVID-19 infection in a large dialysis network across India in 235 centres across 25 states were reviewed for date of infection, centre city and zone. Threshold for testing was locally determined and was mostly symptom based. The type of test was determined by state regulatory practices and was either RT-PCR or Antigen test. Incidence of infection zone wise and centre wise infection burden was reviewed. Age, gender and disposition of patients: hospitalisation or home-based care were noted. Survival status is reported. Results are described as numbers and percentage

Results: n=883 (4.85%)/18200 patients tested positive for COVID-19 during the study period. M:F =637(72.1%):246(27.9%). The age distribution, zonal distribution and zonal incidence of infections and distribution of number of cases in dialysis centres is shown in Table 1. Time trend from COVID 19 is shown in Fig 1. Among 856 (97%) patients for whom outcome was known, 632 (73.8%) survived. 224 (26.2%) died with a M:F of 75%:25% with an age distribution of <20yrs:2(.9%), 20-39yrs:17(7.59%), 40-59yrs:103(45.98%), 6079yrs:98(43.75%), > 80yrs:4(1.79%). Outcome was not known in 27(3.05%) of patients.

Table1: Covid Positive Hemodialysis patients (n=883)		
	No. of Patients	%
Age distribution		
< 20	6	1%
20 - 39	113	13%
40 - 59	434	49%
60 - 79	317	36%
≥ 80	13	1%
Zonal distribution		
North	170	22%
East	51	6%
West	272	19%
South	390	44%
Zonal prevalence		
North	170/3838	4%
East	51/2337	2%
West	272/2468	11%
South	390/8834	4%
Centres reporting COVID-19		
No of cases	No. of Centres	%
< 5	94	30%
5 - 10	37	12%
11 - 19	5	2%
≥ 20	5	2%



Conclusions: We report a high burden of COVID-19 infection among MHD patients which is likely under recognised due to a dominant symptom-based testing approach, the type of diagnostic test used, variation of practices and possible asymptomatic infections. It was geographically widespread and west zone had the highest burden with a male preponderance and mostly middle aged. Large number of dialysis centres had high infection burden. There was a significant decrease in incidence after October for unclear reasons. Mortality was high with similar age and gender distribution as the the total study population. Patient factors, health system and treatment factors will need to be studied to understand mortality determinants.

No conflict of interest

POS-543

EXPERIENCE OF COVID 19 DISEASE ON 159 ECUADORIAN CHRONIC DIALYSIS PATIENTS



SANTACRUZ, J*¹, Santacruz Tipanta, C², Vasquez Pérez, A³, Reinoso, P⁴, Carlotta, S⁴, María Gabriela, S⁴

¹Clinica de los Riñones Menydia, Nephrology- dialysis, Quito, Ecuador; ²Clinica de los riñones Menydia, Nephrology dialysis, Quito, Ecuador; ³Clinica de los riñones Menydia, Nephrology Dialysis, Quito, Ecuador, ⁴Clinica de los riñones Menydia, Nephrology- dialysis, Quito, Ecuador

Introduction: In December 2019, first Covid-19 disease cases were reported. The pandemic spread with 42.039.763 cases and 1.141.223 deaths worldwide until October 2020. Ecuador is a south American country with 156.451 confirmed cases and 12.500 deaths. The aim of this work is to share characteristics and clinical outcomes of 159 dialysis patients in Quito followed during 6 months of pandemic.

Methods: Observational prospective unicenter study with 159 dialysis patients. Follow-up since April to September 2020. Fifty-six consecutive patients (35%) were identified with symptoms linked to COVID-19 disease. Positive PCR testing on nasopharyngeal swabs confirmed diagnosis. Low oxygen saturation (LOS) at presentation classified disease as severe, moderate if symptoms without LOS and asymptomatic if no symptoms. Hospital stay, time until negative PCR, mortality, contagious rate and time until death data were collected from medical record system.

Results: Thirty-seven patients (23.3%) tested positive. Patients with LOS at presentation and hospitalized were older when compared with those without LOS (61.6±11.9vs48.9±11.9years;p= 0.02) and non-hospitalized patients (60.3±12.7 vs 51.4±15.6 years; p=0.02). Ten died (27%), mortality was significant in patients with previous pulmonary disease (p=0.01), LOS at presentation (p= 0.03), need of hospitalization (p=0.01), and severe disease presentation (p=0.03). Median hospital stay was 7 days (3-13), time until negative PCR was 17 days (6-25) and 10 days (6-22) until death.

Conclusions: COVID-19 disease has increased mortality and health care demand in dialysis patients. Previous pulmonary pathology, low oxygen saturation, hospitalization and severe disease at presentation have influenced in mortality, which is inferior to other series reported.

No conflict of interest

POS-544

CARDIOVASCULAR COMORBIDITY IN CKD 5D PATIENTS RURAL AND URBAN POPULATION OF THE REPUBLIC OF UZBEKISTAN



SHARAPOV, O*^{1,2}, Daminov Turgunpulatovich, B^{1,2}, Abdullaev Saydullaevich, S¹, Dyagilev Anatolevich, V³

¹Tashkent Pediatric Medical Institute, Internal diseases, Tashkent, Uzbekistan; ²Republican Specialized Scientific Practical Medical Center of Nephrology and Kidney transplantation, Nephrology, Tashkent, Uzbekistan, ³Syrdarya Regional Multidisciplinary Medical Center, Nephrology and Hemodialysis, Gulistan, Uzbekistan

Introduction: Chronic kidney disease (CKD), defined by a low estimated glomerular filtration rate (GFR), is a common risk factor for cardiovascular disease (CVD). The risk increases with decreasing GFR and is highest (approximately 20 times the general population) in patients with end-stage renal disease (ESRD) requiring dialysis. Uzbekistan is a country with a population of 34 million and has an equal urban and rural population. In this regard, it is of interest to comparatively study the structure of cardiovascular diseases in patients with stage 5 CKD receiving hemodialysis of the rural and urban population of the Republic of Uzbekistan.