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Private Hemodialysis Centres (61.9%) and common symptoms on admission were fever (40.3%), cough (33.9%) and shortness of breath (21.2%). Majority were admitted with mild to moderate disease (category 1,2&3) [n=209 (75.2%)] but more than half [n=151 (54.3%)] progressed to severe disease (category 4 & 5). Common complications that occurred were secondary infection (51.8%) (mainly pneumonia and catheter related blood stream infection), pulmonary embolism (8.6%) and acute cardiac injury (7.2%). Forty three (15.5%) patients died during hospitalisation, whereby 22 were direct covid death. The case fatality rate for cHD was 7.9% which was 13 fold higher than non cHD patients (0.6%) admitted to this centre during the study period.

Conclusions: cHD patients with COVID were commonly admitted with mild disease but majority progressed to severe disease. Secondary infection was the most common complication and the mortality rate was 15.5% with the case fatality rate being 13 folds higher than non cHD patients.

No conflict of interest

POS-965

CHARACTERISTICS, PREDICTIVE FACTORS AND OUTCOMES OF HEMODIALYSIS PATIENTS WITH COVID 19 INFECTION IN THE INTENSIVE CARE UNIT AT A STATE COVID REFERRAL CENTRE



SUPAYAH, J*¹, Wong, HS², Lee, FY³, Chidambaram, SK¹, Wong, EFS¹

¹Hospital Sungai Buloh, Medicine, Sungai Buloh, Malaysia; ²Hospital Selayang, Nephrology, Batu Caves, Malaysia, ³Hospital Selayang, Clinical Research Centre, Batu Caves, Malaysia

Introduction: Patients with end-stage kidney disease (ESKD) on chronic haemodialysis (cHD) have been reported to have poorer outcome. There is currently lack of data on the predictive factors and outcomes of severe covid infection (Category 4 & 5) in cHD patients managed in the intensive care unit (ICU).

Methods: This retrospective cohort study was conducted in a state COVID referral centre involving all cHD patients with COVID-19 admitted from 1st March 2020 till 28th February 2021. Patients on cHD were identified from the hospital covid ESKD database and demographic, clinical and outcome data of cHD patients were retrieved from the hospital information system. Data were analysed using SPSS Version 23.

Results: Of a total of 278 cHD patients admitted to the state COVID referral centre during the study period, 49 (17.6%) required ICU care. Most patients admitted to ICU were below the age of 65 years old (n=40, 81.6%) with the mean age of 53.5 ± 11.4 years and predominantly male (n=36, 73.5%). The common comorbidities were hypertension (n=37, 75.5%) and diabetes (n=31, 63.3%). Mean hospitalization prior to ICU admission was 3.6 ± (6.7) days. After adjusting for possible confounding factors, factors associated with ICU admission were the age of 65 and above (adjusted Odds Ratio, aOR 3.169, 95% Confidence Interval [CI] : 1.090,9.217), oxygen saturation level <95% upon hospital admission (aOR 5.642, 95% CI: 2.241, 14.205), presence of nosocomial pneumonia (aOR 16.610, 95% CI: 5.720,48.231), arrhythmia (aOR 49.857, 95% CI: 4.023,617.939) and gastrointestinal bleeding (aOR 26.324,95% CI: 4.112,168.511). Of those patients requiring ventilation (n=34, 69.4%), only 15 (44.1%) survived. The overall mortality rate in ICU was 44.9% with the median survival of 18.5 days.

Conclusions: Factors associated with ICU admission for cHD patients were the age of 65 and above, oxygen saturation level <95% upon hospital admission, presence of nosocomial pneumonia, arrhythmia and gastrointestinal bleeding. cHD patients have very high mortality rate especially those that required ventilation

No conflict of interest

POS-966

CLINICAL OUTCOME OF COVID-19 INFECTION AND END STAGE KIDNEY DISEASE PATIENTS IN A NEPHROLOGY SPECIALIZED WARD: ARE WE MOVING TOWARDS BETTER?



SZE, X*¹, Fuah, KW¹, Lim, CTS², Alias, AA¹, Fadhlina, NZ², Md Shah, A², Ibrahim, FH¹, Goh, BL¹

¹Hospital Serdang, Nephrology Department, Selangor, Malaysia, ²Faculty of Medicine and Health Science- Universiti Putra Malaysia, Nephrology Unit, Selangor, Malaysia

Introduction: Patients with kidney disease are particularly vulnerable to severe COVID-19 as well as having higher risk of developing complications. We report the clinical experience of our nephrology team in managing COVID-19 cases when renal ward was converted to COVID-19 ward during this pandemic.

Methods: This is a single centre, prospective study of a series of end stage kidney disease (ESKD) patients who were admitted into a tertiary hospital nephrology ward in Serdang Hospital, from 27th July – 26th August 2021 with Covid-19 infections. These patients were managed by a team of nephrologist, nephrology trainees, medical officers and staff nurses with the advantage of a build in dialysis unit within the ward. The patients' demographic data and clinical information were collected from the electronic health record (eHIS). Data was analysed using SPSS version 23.

Results: A total of 59 patients with mean age of 53.7(± 11.8) years, with males, n: 34(57.6%) were admitted. 38(64.4%) of these patients were regular dialysis patients with dialysis vintage of > 3 months. Comorbidities included were hypertension 88%, diabetes mellitus 56%, and ischemic heart disease 17%. 56% of them presented with upper respiratory tract symptoms, 47.5% with lower respiratory symptoms, 45.8% with fever, 16.9% with gastrointestinal symptoms and 15.3% were asymptomatic. Majority of them presented with COVID-19 category 3 (42%) and category 4 (37%). 27% patients have completed 2 doses of COVID-19 vaccination, and 28% were unvaccinated. Median absolute lymphocytes count was 1.03x 10³/uL (0.69,1.41). median CRP was 31.5mg/L (10, 81.6) and mean serum albumin was 27.8g/L (SD 6.6). As compared to early phase(January-March 2021) whereas end stage kidney disease on regular dialysis was not managed by nephrology team, the mortality rate was 42.9%. In current study, the overall mortality rate was 29%. Sub-analysis revealed mortality rate for ESKD on regular dialysis vs non-regular dialysis was 21% vs 43% respectively. Univariate analysis showed that male gender (OR 5.1, p=0.021), ischaemic heart disease (OR 5.2, p=0.024), unvaccinated (OR 13.3, p=0.023), serum albumin < 30 g/L (OR 7.4, p=0.015) and CRP > 100 mg/L (OR 6.5, p=0.004) were associated with higher risk of death. In multivariate analysis, unvaccinated patients (OR 23.2, p=0.044) and every single unit increased of CRP value (OR 1.01, p=0.017) were associated with an increased risk of mortality.

Conclusions: The increased risk of mortality in ESKD attributed to Covid-19 infection was high and vaccination conferred protection to our ESKD population. In addition to vaccination, Covid-19 patients with kidney disease had improved outcome when managed by dedicated nephrology team in a specialised renal ward as complications such as fluid overload, acid base and electrolytes abnormalities can be identified, treated, and reversed readily.

No conflict of interest

POS-967

PUBLIC-PRIVATE PARTNERSHIP TO PROVIDE HAEMODIALYSIS IN COVID-19 END-STAGE KIDNEY DISEASE PATIENTS IN KLANG VALLEY, MALAYSIA



TAN, MH*¹, Yee, SY¹, Yahya, R¹, Bavanandan, S¹

¹Hospital Kuala Lumpur, Department of Nephrology, Kuala Lumpur, Malaysia

Introduction: During the COVID-19 pandemic in Malaysia, there were 484,895 new COVID-19-infected patients between June to August 2021 in Klang Valley and 77.6% warranted hospital admissions. About 1800 patients with end-stage kidney disease (ESKD) on regular dialysis were admitted during this period. This has resulted in a severe shortage of beds and haemodialysis (HD) staff in public hospitals, where the majority of COVID-19 patients were admitted. We initiated a pioneer public-private partnership where stable COVID-19-infected HD patients were discharged earlier than 14 days and HD sessions arranged at a private facility (DWM) nearby, with funding from the Ministry of Health Malaysia.

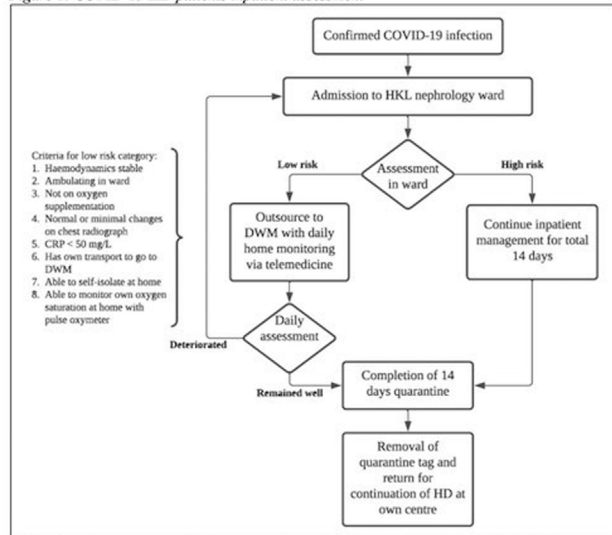
Methods: This retrospective study recruited all COVID-19-infected HD patients who were admitted to Nephrology Ward, Hospital Kuala Lumpur (HKL) from June to August 2021. The patients' demography, clinical details including COVID-19 infection, the outcome of this initiative and patients' satisfaction were investigated.

Results: Four-hundred-thirteen patients were admitted for COVID-19 infection during this period. After assessment, 55 (13.3%) patients were categorised as 'low risk' (Figure 1) and were discharged with outpatient HD sessions at DWM. The average hospital stay was shortened to 4 days. Self-monitoring of oxygen saturations and symptoms were carried out with daily teleconsultation with Nephrology team HKL (Figure 2). The majority were female (60%) with mean age of 50.9 ± 14.7 years. About 38% reside outside Kuala Lumpur area. Nearly half of these HD patients (47.3%) have both diabetes mellitus and hypertension.

In the 'low risk' group of 55 patients, 76.4% (n=42) were symptomatic of COVID-19 infection and 38.2% (n=21) had abnormal chest radiograph findings such as ground glass appearance, consolidation and pulmonary oedema. Mean C-reactive protein was 12.9 ± 10.8 mg/L. One-fifth (n=12) of the patients were readmitted for hypoxia and worsening of general condition and 3.6% (n=2) died due to severe organising pneumonia.

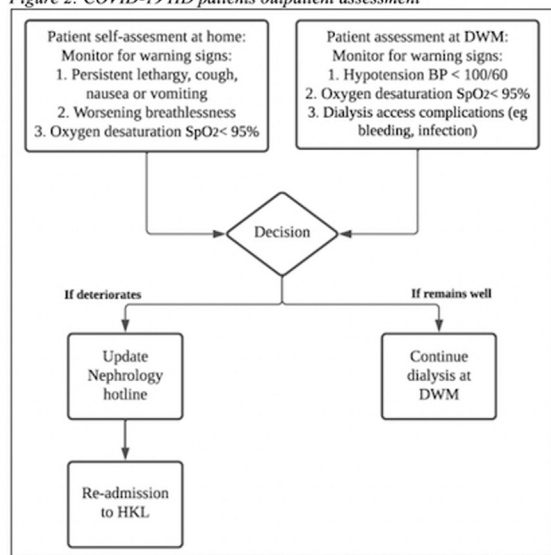
Thirty-eight patients responded to a feedback questionnaire regarding this initiative (Table 2). Most (94.7%) of them favoured DWM facility and 97.4% were satisfied with the service provided. In addition, 97.4% of patients (n=37) scored 8-10 for the coordination between DWM and HKL.

Figure 1: COVID-19 HD patients inpatient assessment



CRP C-reactive protein; DWM partner private dialysis centre; HKL Hospital Kuala Lumpur; HD haemodialysis

Figure 2: COVID-19 HD patients outpatient assessment



BP blood pressure; DWM partner private dialysis centre; HKL Hospital Kuala Lumpur; HD haemodialysis

Table 1: Characteristics of patients

Characteristic	Outsourced patients (N=55)
Mean age - year	50.9 ± 14.7
Gender - no (%)	
Male	22 (40)
Female	33 (60)
Area of residence - no (%)	
Kuala Lumpur	37 (62.3)
Outside Kuala Lumpur	18 (37.7)
Presence of symptoms - no (%)	42 (76.4)
Comorbid disease - no (%)	
Diabetes mellitus	28 (50.9)
Hypertension	47 (85.5)
Diabetes mellitus and hypertension	26 (47.3)
Dyslipidaemia	35 (63.6)
Ischaemic heart disease	8 (14.5)
Chest x-ray findings - no (%)	
Normal	34 (61.8)
Ground glass appearance	14 (25.5)
Consolidation	3 (5.5)
Pulmonary oedema	4 (7.2)
Mean C-reactive protein - mg/dL	12.9 ± 10.8
Clinical progression - no (%)	
Recovered	43 (78.2)
Desaturated and readmitted	12 (21.8)
Mortality - no (%)	2 (3.6)

Conclusions: This is the first public-private initiative in the provision of haemodialysis in Malaysia during the COVID-19 pandemic. It has reduced the pressure for hospital beds and mobilised manpower to other critical areas in the hospital.

Conflict of interest

Potential conflict of interest:

Dr Seow Yeing Yee is the Nephrologist in Charge of DWM

POS-968

COVID-19 PANDEMIC IDENTIFIES SIGNIFICANT GLOBAL INEQUITIES IN HEMODIALYSIS CARE IN LOW AND LOWER MIDDLE INCOME COUNTRIES - AN ISN/DOPPS SURVEY



Tannor, EK¹, BIEBER, B², Luyckx, V^{3,4,5}, Shah, DS⁶, Liew, A⁷, Evans, R⁸, Aylward, R^{9,10}, Guedes, M¹¹, Pisoni, RL¹², Robinson, BM¹², Caskey, F⁹, Jha, V^{13,14}, Pecoits-Filho, R^{11,12}, Dreyer, G¹⁵

¹Kwame Nkrumah University of Science and Technology, Department of Medicine, Kumasi, Ghana; ²Arbor Research Collaborative for Health, DOPPS, Ann Arbor, United States; ³Harvard Medical School, Renal Division-Brigham and Women's Hospital, Boston, United States; ⁴Nephrology, University Children's Hospital Zurich, Zurich, Switzerland; ⁵University of Cape Town, Department of Paediatrics and Child Health, Cape Town, South Africa; ⁶Tribhuvan University Teaching Hospital, Department of Nephrology and Transplant Medicine- Institute of Medicine, Kathmandu, Nepal; ⁷Mount Elizabeth Novena Hospital, The Kidney & Transplant Practice, Novena, Singapore; ⁸University of British Columbia, Department of Transplantation, Vancouver, Canada; ⁹University of Bristol, Population Health Sciences-Bristol Medical School, Bristol, United Kingdom; ¹⁰University of Cape Town, Department of Medicine- Faculty of Health Sciences, Cape Town, South Africa; ¹¹Pontificia Universidade Católica do Paraná, Department of Health Sciences, Curitiba, Brazil; ¹²Arbor Research Collaborative for Health, DOPPS Program, Ann Arbor, United States; ¹³George Institute for Global Health, Epidemiology, New Delhi, India; ¹⁴Imperial College, School of Public Health, London, United Kingdom; ¹⁵Barts Health NHS Trust, Department of Renal Medicine, London, United Kingdom