25 men). The average age was 58.6 years (45–84 years). Time spent on haemodialysis: up to 1 year: 59 patients; up to 5 years: 16 patients; and >5 years: 15 patients. Average 4.9 years (1–20 years). The main causes leading to the end stage of renal failure were: polycystic disease (24%), type 2 diabetes mellitus (20%), hypertension (16%), glomerulonephritis (23%) and others (17%). The group of medical staff consisted of 43 people (16 doctors and 27 nurses). The ratio of men and women is 1:3 and 1:5.7, respectively. The average age of doctors is 50.3 ± 15.6 years; nurses 34.1 ± 8.2 years.

For comparison, we used materials from the meta-analysis [1], where the prevalence of depression was 15.97% and anxiety was 15.15% as the consequence of the COVID-19 pandemic for the mentally healthy population.

RESULTS: In the group of patients, anxiety and depression were detected in 16 patients (40%), in 4 patients (10%) —clinically significant. By the time spent on haemodialysis: up to 1 year: 4 patients (without clinically significant manifestations); up to 5 years: 7 patients (3 with clinically significant manifestations); and >5 years: 5 patients (1 with clinically significant manifestations). In the group of medical staff, anxiety and depression were detected in 13 people (32.5%), of which clinically significant in 4 people (9.3%). Anxiety and depression were found in 6 doctors (37.5%) and in 7 nurses (25.9%) (1 man and 6 women). Clinically significant manifestations were noted in 2 doctors and 2 nurses. In the group of patients, anxiety and depression were observed in 1 young patient, in 5 middle-aged patients and in 10 elderly patients (60–74 years old). In the group of medical workers, an increased level of anxiety and depression were observed in 10 young people and in 3 middle-aged people.

CONCLUSION: Patients on haemodialysis and dialysis centre staff, the levels of anxiety and depression were twice times higher compared with the data of anxiety and depression in healthy populations during the COVID-19 pandemic. Patients on haemodialysis and medical staff had same level of anxiety and depression. The level of anxiety and depression among doctors was significantly higher than in nurse; this difference can be explained by a small sample, as well as a higher level of education among doctors and a tendency to reflect.

REFERENCE
1. Khramov EV and Ivanov VS. Modern foreign studies of depressive disorders during difference can be explained by a small sample, as well as a higher level of education on the meta-analysis [1], where the prevalence of depression was 15.97% and anxiety was 15.15% as the consequence of the COVID-19 pandemic for the mentally healthy population.

RESULTS: In the group of patients, anxiety and depression were detected in 16 patients (40%), in 4 patients (10%) —clinically significant. By the time spent on haemodialysis: up to 1 year: 4 patients (without clinically significant manifestations); up to 5 years: 7 patients (3 with clinically significant manifestations); and >5 years: 5 patients (1 with clinically significant manifestations). In the group of medical staff, anxiety and depression were detected in 13 people (32.5%), of which clinically significant in 4 people (9.3%). Anxiety and depression were found in 6 doctors (37.5%) and in 7 nurses (25.9%) (1 man and 6 women). Clinically significant manifestations were noted in 2 doctors and 2 nurses. In the group of patients, anxiety and depression were observed in 1 young patient, in 5 middle-aged patients and in 10 elderly patients (60–74 years old). In the group of medical workers, an increased level of anxiety and depression were observed in 10 young people and in 3 middle-aged people.

CONCLUSION: Patients on haemodialysis and dialysis centre staff, the levels of anxiety and depression were twice times higher compared with the data of anxiety and depression in healthy populations during the COVID-19 pandemic. Patients on haemodialysis and medical staff had same level of anxiety and depression. The level of anxiety and depression among doctors was significantly higher than in nurse; this difference can be explained by a small sample, as well as a higher level of education among doctors and a tendency to reflect.

REFERENCE
1. Khramov EV and Ivanov VS. Modern foreign studies of depressive disorders during difference can be explained by a small sample, as well as a higher level of education.

Appendix A: Table 1.

| Category      | Rating |
|---------------|--------|
| Attention     | 8%     |
| Memory        | 11%    |
| Learning      | 3%     |

CONCLUSION: The patients’ perception of their attention capacity, memory function and learning capacity was in general positive. However, further studies using validated questionnaires regarding different aspects such as attention, memory or learning functionality are needed to confirm these findings.

MO918 THE TIME TO NEGATIVE CONVERSION AMONG ADULT COVID-19 PATIENTS ON CHRONIC HEMODIALYSIS ADMITTED AT THE PHILIPPINE GENERAL HOSPITAL

Kristine May Valmoria1, Paolo Nikoali So2 and Elizabeth Montemayor2

1Philippine General Hospital, University of the Philippines, Manila, The Philippines and 2Division of Nephrology, Philippine General Hospital, Internal Medicine, University of the Philippines, Manila, The Philippines

BACKGROUND AND AIM: In the Philippines, the shortage of dialysis centers that cater to ESKD individuals who tested positive for COVID-19 uniquely presents a logistic challenge, as these patients remain admitted in COVID-19 hospitals with hemodialysis units despite the clinical resolution of their disease. The majority of free-standing hemodialysis units require proof of negative conversion despite recommendations from local guidelines.

As proof of negative conversion remains important in many practical settings, the negative conversion rate of SARS-CoV-2 infection has been the subject of several investigations. However, negative conversion rates particularly for ESKD patients with COVID-19 infection are lacking.

Hence, this study aims to determine the time to negative conversion of COVID-19 RT-PCR testing among adult COVID-19 patients on chronic hemodialysis admitted at the Philippine General Hospital (PGH), a tertiary government hospital assigned as one of the COVID-19 referral centers in the country. This knowledge will allow for a more systematic and evidence-based implementation of the test-based approach, ultimately determining whether such an approach can be shifted to a symptom or time-based procedure in order to shorten the isolation period and conserve resources, especially in resource-limited settings.

METHOD: This is a retrospective cohort study. All adult patients on chronic hemodialysis who were admitted at PGH after the diagnosis of COVID-19 by RT-PCR between March 2020 and February 2021 were included. Patients who were asymptomatic for COVID-19, whose charts could not be retrieved, whose COVID-19 RT-PCR results were missing and those who died or got discharged without having a negative COVID-19 RT-PCR result were excluded in this study. Descriptive statistics were used in summarizing the data. Time to negative conversion is the primary outcome measure.

RESULTS: A total of 90 patients who were on chronic hemodialysis and tested positive for COVID-19 via RT-PCR admitted at PGH at the specified time period met the inclusion and exclusion criteria. A total of 60% were males and the median age was 55 years old. The mean HD vintage was 2.95 years. Among the causes of ESKD, 46% was from hypertension, 31% was due to diabetes mellitus, 15% due to chronic hemodialysis, 0.80% was caused by autosomal polycystic kidney disease, 2.50% was due to obstructive uropathy and the remaining 4.0% of patients with ESKD were due to other causes such as NSAID nephropathy, gouty nephropathy, etc. Of these, 17% had mild, 53% had moderate, 18% had severe and 12% had critical COVID-19. The mean number of days from the onset of symptoms to clinical recovery is 22.48 days; the median was 18 days. One patient had clinical recovery only after 84 days. The median time to first negative conversion was 24.5 days, with a mean of 26.65 days. There were 6.67% who achieved negative conversion on the first week; 15.56% on the second week; 24.44% on the third week; 26.67% on the fourth week; 8.89% on the fifth week; 6.67% on the sixth week; 4.44% on the seventh week; 5.56% on the eighth week; and 1.11% on the ninth week. After 28 days, 90% of the patients had clinical recovery; but 15% of them still had positive RT-PCR results.

CONCLUSION: Among adult patients on chronic hemodialysis who were admitted at PGH after the diagnosis of COVID-19 by RT-PCR between March 2020 and February 2021, the median time to negative conversion was 24.5 days.
MO919 PERSISTENCE OF ANTIBOIES AFTER SARS-COV-2 VACCINES IN HAEMODIALYSIS PATIENTS: A 6 MONTHS FOLLOW-UP

Ahmet Murt, Mehmet Riza Altiparmak, Meltem Pekpak and Rezzan Ataman
1Nephrology, Cerrahpasa Medical Faculty, Istanbul University-Cerrahpasa, Turkey, Turkey

BACKGROUND AND AIMS: As COVID-19 related mortality is higher in haemodialysis patients than in the general population, proper vaccination strategies against the SARS-CoV-2 virus have utmost importance. It has been previously shown that mRNA vaccines (e.g. BNT162b2) can generate >95% of seropositivity in haemodialysis patients [1]. On the other hand, the seropositivity rate reached by the inactivated vaccine (CoronaVac®) was around 80%. In this study, we aimed to analyse the persistence of SARS-CoV-2 antibodies in haemodialysis patients for 6 months and compare it with the healthy controls.

METHOD: Haemodialysis patients who were vaccinated either by BNT162b2 or CoronaVac® and who continued their regular controls for 6 months were involved in the study. Those who had previous or active SARS-CoV-2 infection, who had malignancies and those who had received immunosuppressive drugs in the previous 12 month were excluded from the study. SARS-CoV-2 IgG levels were measured by a commercial test after the first doses of the vaccines and at the end of the sixth month. Healthy healthcare workers who were vaccinated with similar vaccine schemes were taken as the control group.

RESULTS: We recruited 85 haemodialysis patients who had received their first doses of either vaccine. Of them, 4 patients died; 3 patients were hospitalized because of COVID-19 infection during the follow-up; 9 patients missed at least one of their regular controls; and 2 patients were diagnosed with malignancy. A total of 26 patients experienced asymptomatic or mild COVID-19 infection during the follow-up period. SARS-CoV-2 IgG levels were measured at the end of the sixth month for the remaining 41 patients. Sero-positivity significantly decreased at the end of the sixth month for both vaccines, but the BNT162b2 group (n = 22) still had better seropositivity than CoronaVac® (n = 19) group (81% versus 50%; P = .03). In contrast, the seropositivity of healthy controls, even with the inactivated vaccine, was 96%. When one booster dose was applied, 90% of seropositivity could be maintained in the BNT162b2 group at the sixth month.

CONCLUSION: BNT162b2 vaccine generates more persistent antibodies than inactivated vaccines in haemodialysis patients. However, when compared with the healthy controls at the end of the sixth month, antibody titers decrease more profoundly in haemodialysis patients. The booster dose can maintain the antibody levels and should be applied at least every 6 months.

REFERENCE

1. Murt A, Altiparmak MR, Yadigar S et al. Antibody responses to the SARS-CoV-2 vaccines in hemodialysis patients: is inactivated vaccine effective? Ther Apher Dial. https://doi.org/10.1111/1744-9987.13752 (5 November 2021, date last accessed).

MO920 SARS-COV-2 NEUTRALIZING ANTIBODY RESPONSE TO BOOSTER VACCINATION IN PATIENTS ON HEMODIALYSIS

Xiaoling Wang1, Maggie Han1, Kevin Wang2, Ohnmar Thwin1, Lemuel Rivera-Fuentes1, Zahir Haq1, Nadja Grobe1, Yudong Wang2 and Peter Kotanko1,3
1Renal Research Institute, New York, USA, 2University of California, Santa Barbara, Santa Barbara, USA and 3Icahn School of Medicine at Mount Sinai, New York, USA

BACKGROUND AND AIMS: SARS-CoV-2 antibody titers after two doses of vaccination decrease over time. Hemodialysis patients are especially vulnerable to COVID-19 as they are immunocompromised, putting them at higher risk of infection and poorer response to vaccines. Therefore, administrating the third dose (‘booster’) in these patients is key to reduce COVID-19 infections and prevent severe illness. Dialysis patients were among the first group of patients who received booster vaccinations. To study the humoral response to the third injection in this group, we collected serum from 33 patients on hemodialysis and measured neutralizing antibody titers against SARS-CoV-2 before and after their booster doses.

METHOD: Patients were recruited from a dialysis center in New York City, NY from June to September 2021. Data on COVID-19 vaccination and demographics were collected upon enrollment. Blood samples were taken after enrollment. SARS-CoV-2 neutralization antibodies were assayed using the GenScript SARS-CoV-2 Surrogate Virus Neutralization Test Kit (Cat#L00847-A). Corresponding neutralizing antibody titers are presented as Unit/mL (U/mL).