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Introduction: Coronavirus disease 2019(COVID19), which is caused by severe acute respiratory syndrome coronavirus2 (SARS-COV-2), primarily manifests as an acute respiratory illness but it can affect multiple organs including kidney. Our world dialysis service, based on ~2 kg of waste from each dialysis treatment, would generate ~625,000 tones of plastic waste, waste that would be potentially reusable if simple sterilizing techniques were applied to it at the point of generation. The waste stream in the HD unit basically consists of: Clinical Waste Bags, Domestic Waste Bags, Sharps Bins Boxes, Fluid Wastes

Methods: **Aim:** To assess and compare biomedical waste generated in COVID 19 pandemic first and second wave at tertiary care hospital.

Materials and Methods: Total number of hemodialysis session in tertiary care hospital during first wave of COVID 19 pandemic from April to November 2020 and second wave of pandemic from April 2021 to July 2021 were included in this study.

Bio waste generated was divided into solid and liquid waste. Total solid waste generated for each session of hemodialysis is calculated which is further divided into plastic and non plastic waste. Liquid waste generated during each session of hemodialysis was calculated. Weight of AV fistula needle, Artificial kidney, Dialyzer tubing, IV set, Transducer protector, syringes, gloves, aprons, acid bicarbonate bags , used saline bottles, Dialysis kits (gauze piece and plasters), Disposable bed sheet, Sanitizer bottle, PPE kit calculated on electronic weighing machine. Total weight of items were multiplied by number of sessions. Total liquid waste generated for each session was calculated and is multiplied by number of sessions. Total waste generated was calculated based on number of sessions.

Results: Waste generated for each session of hemodialysis in COVID19 Pandemic:

Item	weight
Av fistula needle	20gm
Artificial kidney	420gm
Dialyser tubings	300gm
Iv set	14gm
Transducer protector	2gm
Syringes (10cc and 5 cc)	16gm
Gloves (2 set)	5gm
Apron (for positive patients)	100gm
Acid ,bicarbonate bags and used saline bottle	100gm
Dialysis kits (gauze piece and plasters)	30gm
Disposable bed sheet	15gm
Sanitizer bottle /20 patients	30 gm(1.5gm/pt)
PPE kit 3/ 20 patients (300x3)	900gm(45gm/pt)
TOTAL	1068.5GM

Solid waste generated for each session:

Total waste -1068.5gm
 Plastic waste -892gm
 Non plastic waste -176.5gm

Liquid waste generated for each session:

Water- 120 litre

Chemicals

Acid -4 litre
 Bicarbonate- 8litre
 Reuse chemicals -NA
 Citric acid-90 ml
 Bleach + acetic acid - 180 ml
 1% bleach-60 lit/20 pts

TOTAL - WATER-120L; CHEMICALS- 15.27 L

TOTAL NUMBER OF SESSIONS IN FIRST WAVE OF COVID PANDEMIC:

n= 3111

Total waste -3324.1KG
 Plastic waste -2775KG
 Non plastic waste -549KG
 TOTAL - WATER- 373320L; CHEMICALS- 47504.9 L

TOTAL NUMBER OF SESSIONS IN SECOND WAVE OF COVID PANDEMIC:

n=1608

Total waste -1718.1 KG

Plastic waste -1434.3KG

Non plastic waste -283.8KG

TOTAL - WATER- 192960L; CHEMICALS- 24554L

Comparison of Non COVID and COVID waste generation per session:

Items	Waste generated in Non COVID dialysis session	Waste generated in COVID dialysis session	Difference in weight of waste generation
Total solid waste	1007gm	1068.5gm	61.5gm
Plastic waste	847gm	892gm	45gm
Non plastic waste	160gm	176.5gm	16.5gm
Total water waste	120L	120L	-
Total chemical waste	12.27L	15.27L	3L

(calculated per session)

Total number of sessions for COVID dialysis were 3111. We extrapolated the waste generation for equal number of non COVID session

Comparison of non COVID and COVID waste generation for 3111 session:

	Estimated waste generation for 3111 Non COVID sessions	Estimated waste generation for 3111 COVID sessions	Difference in waste generation	Percentage (%)
Total solid waste	3132.77 Kg	3324.1 Kg	191.33 Kg	6.09
Plastic waste	2635.01 Kg	2775 Kg	140 Kg	5.3
Non plastic waste	497.76 Kg	549 Kg	52 Kg	10.4
Total water waste	373320 L	373320 L	-	-
Total chemical waste	38171.97L	47504.9 L	9333L	24.4

Estimated extra solid waste generated is in excess of 200kg and liquid waste is in excess of 9333Litre.

Conclusions: Total solid waste generated is 6.09% more in COVID pandemic for equivalent number of sessions than non COVID.

Total plastic waste generated is 5.3% more in COVID pandemic for equivalent number of sessions than non COVID.

Total chemical waste generated is 24.4% more in COVID pandemic for equivalent number of sessions than non COVID.

No conflict of interest

POS-887

GROSS HEMATURIA AFTER SARS-COV-2 VACCINATION: QUESTIONNAIRE SURVEY IN JAPAN



AOKI, R*¹, NIhei, Y¹, Matsuzaki, K², Suzuki, H¹, Kihara, M¹, Yokoo, T³, Kashihara, N⁴, Narita, I⁵, Suzuki, Y¹

¹Juntendo University Faculty of Medicine, Department of Nephrology, Tokyo, Japan; ²Kyoto University, Health Service, Kyoto, Japan; ³Jikei University School of Medicine, Division of Kidney and Hypertension- Department of Internal Medicine, Tokyo, Japan; ⁴Kawasaki Medical School, Department of Nephrology and Hypertension, Kurashiki, Japan, ⁵Niigata

University Graduate School of Medical and Dental Sciences, Division of Clinical Nephrology and Rheumatology, Niigata, Japan

Introduction: The effective control of coronavirus disease 2019 (COVID-19) can be achieved by implementing a global vaccination strategy. After millions of mRNA vaccines targeting severe acute respiratory syndrome coronavirus-2 (SARS-CoV-2) have been administered worldwide, several reports have shown the cases with gross hematuria following the mRNA vaccine against SARS-CoV2 in patients with glomerulonephritis, especially immunoglobulin A nephropathy (IgAN). In Japan, healthcare workers were initially vaccinated with mRNA vaccines from February 17, 2021, and we experienced the several cases showing gross hematuria after the administration of the second dose of an mRNA vaccine among these vaccinated healthcare workers; thus, we conducted a web-based survey of the councilor members of the Japanese Society of Nephrology to elucidate the frequency and clinical course of gross hematuria after receiving the COVID-19 vaccination.

Methods: We sent the emails to the councilor members (581 members from 382 facilities) and asked them whether they experienced the case of gross hematuria following the mRNA vaccine. Then, we asked the following questions to those who reported the cases of hematuria; the incidence of elevated serum creatinine levels, the amount of proteinuria and hematuria, and pathological diagnosis in the case whom a renal biopsy was performed.

Results: In reply to the email, 27 cases showed gross hematuria after receiving a COVID-19 vaccine. Our survey showed that the incidence of gross hematuria was skewed toward females, with 22 cases (81.4%). In 18 cases (66.7%), gross hematuria was disappeared by three days after appearance. Nineteen cases (70.4%) have been already diagnosed with IgAN before the occurrence of gross hematuria. Eight cases showed proteinuria and five did hematuria for the first time after vaccination. According to the tracking study, we found that a renal biopsy was performed after vaccination in four cases, all of whom were diagnosed with IgAN. Only one case showed a slightly increased serum creatinine level, however no patients progressed to severe renal dysfunction, during the observation period.

Conclusions: We investigated the clinical characteristics of gross hematuria after COVID-19 vaccination in Japan. Our study showed that the incidence of hematuria was more common in females than males. The duration between the vaccination and the appearance of gross hematuria was within two-five days and the hematuria disappeared following a few days. Since there were no cases who showed obvious progression to severe renal dysfunction in our survey, the present mRNA vaccination protocol induced transient macrohematuria without continuous aggravation of renal function. Further studies are needed to clarify the underlying mechanism of gross hematuria following COVID-19 vaccination.

No conflict of interest

POS-888

COVID 19 PATIENTS WITH A NEPHROLOGIC CONCERN: A DESCRIPTIVE STUDY FROM A SINGLE CENTER IN TUNISIA



BEN SALAH, M¹, Hafi, K¹, Ben Salem, M¹, Handous, I¹, Letaief, A¹, Hammouda, M¹, Aloui, S¹, Skhiri, H¹

¹university hospital of monastir, nephrology, Monastir, Tunisia

Introduction: COVID 19 was characterized as a pandemic by the WHO since march 2020. peoples all over the world suffered from this infection but patients with chronic diseases such as kidney impairment were seriously affected. Moreover, a varied pattern of kidney injury was described with COVID 19. the purpose of our study was to relate demographic, clinical and biological features in patients infected by the SARS-Cov 2 and referred either to our nephrology department or hemodialysis (HD) center.

Methods: We retrospectively collected data about patients with a nephrologic matter, who suffered from COVID 19 between October 2020 and march 2021.

Results: 100 patients were included. 54% were men and 46% were women. The mean age of the patients was 59.55±15.5 years. 63% were hospitalized and the others were dialyzed in our HD unity. 5% of the hospitalized patients experienced a severe form and were admitted in the nephrology intensive care unit. 40% were diabetic and 55% were hypertensive. 21% had a cardiopathy and 81% had a chronic kidney

disease. Among them 47% were on HD, 7% were transplanted and one patient received peritoneal dialysis. 29% were obese and 4% were active smoker. A positive contact tracing with a COVID 19 confirmed case was found in 43% of cases. As for Clinical severity of the infection: 18% of our patients had no symptoms, 40% had a mild infection, 19% had a moderate disease and 23% had unfortunately a severe form. The most frequent symptoms were respectively: asthenia (47%), fever (43%), dry cough (43%), dyspnea (43%), diarrhea (25%) and arthromyalgia (19%). The profile of kidney impairment occurred within SARS Cov2 infection was as follow: acute kidney injury in 11%, altered chronic renal function in 23%, hematuria in 3.2% and proteinuria in 6.4% of all cases. main laboratory findings were lymphopenia (38%), lactate dehydrogenase elevation (46%), metabolic acidosis (36%), hyponatremia (21%), hyponatremia (16%), hyperkalemia (16%), low prothrombin time (11%). CT Scan imaging of the chest showed mild lung injury in 25%, moderate lung injury in 27% and severe lung injury in 20% of all patients. The main pejorative outcomes noted were: respiratory bacterial superinfection (19%), hemophagocytic lymphohistiocytosis (6%) and acute severe respiratory syndrome (5%). finally, 88% of our patients had a global favorable outcome and were discharged from hospital but unfortunately 12% died.

Conclusions: According to our study, demographic and clinical characteristics of nephrologic patients seems to be similar to the general population but they may be more exposed to serious outcomes especially death.

No conflict of interest

POS-889

HEMOPHAGOCYtic LYMPHOHISTIOCYTOSIS SECONDARY TO COVID-19 IN PATIENTS WITH CHRONIC KIDNEY DISEASE: WHEN WORSE COMES TO WORST



Handous, I¹, Mojaat, M¹, Ben Salah, M^{*1}, Ben salem, M¹, Hammouda, M¹, Letaief, A¹, Aloui, S¹, Skhiri, H¹

¹Fattouma Bourguiba Hospital- university of Monastir, nephrology, Monastir, Tunisia

Introduction: Recently, secondary hemophagocytic lymphohistiocytosis (SHLH) has been reported in many cases mostly with critically-ill COVID-19 patients. However, the optimal therapeutic approach is still unclear especially in patients with chronic kidney disease.

Methods: Eight patients with chronic kidney disease were admitted to our nephrology department for COVID-19 infection. Diagnosis was confirmed by a positive reverse transcriptase-polymerase chain reaction assay of a nasopharyngeal swab for SARS-CoV-2. All showed hyperinflammation. SHLH was confirmed by using Hscore.

Results: We included eight patients: five men and three women. Mean age was 54.1 years. The initial nephropathies were: diabetic (2 cases), nephroangiosclerosis (2 cases), systemic lupus erythematosus, ANCA vasculitis, Fabry disease and one case of plasma cell leukemia discovered during this infection. The initial presentation was marked by dyspnea (7 cases / 8), digestive symptoms (5 cases / 8), fever (3 cases / 8). Seven patients had dyspnea with a mean saturation on room air of 87.5 ± 5.2% requiring oxygen therapy with a mean flow rate of 9 ± 5 l/min. The use of nasal high Flow therapy was required in 3 patients. Chest CT scans showed 25 to 50% ground glass opacities with crazy paving sign in 3 cases and 50 to 75% in 4 cases. The only patient who did not present with respiratory symptoms was a kidney transplant recipient who presented with diarrhea. All patients had fever > 38°C either on admission or within 72 hours. The blood count abnormalities were dominated by: lymphopenia, anemia and thrombocytopenia with respectively means of 0.513±0.282 10⁹ cells/L; 7.3± 2.1 g/dl; 146x 10⁹ cells/L. The mean ferritinemia and triglycerides were 1702.1 µg/L and 4.2±1.3mmol/l, respectively. Organomegaly was found in one patient and fibrinogen was low in one patient (not available in 5 cases). Bone marrow aspiration was performed within 2 to 7 days after admission and showed haemophagocytosis. The mean Hscore was 192.5. Patients with dyspnea received intravenous dexamethasone (6 mg/day). All patients received intravenous immunoglobulins (0.4g/kg/day for 5 days) except a patient who responded well to corticosteroids alone. The outcome was favorable for seven patients with withdrawal from oxygen therapy within 3 to 5 days, only one death was noted in the 34-year-old patient with ANCA vasculitis with respiratory distress syndrome. The