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SARS-COV2 INFECTION IN THE POPULATION ON PERITONEAL DIALYSISSamarra Badrouchi¹, Samia Barbouch^{1,2}, Hajji Mariem^{1,2}, Amira Sakay¹, Rawnak Houli¹, Mondher Ounissi¹, Imen Gorsane^{1,2}, Fethi Ben Hmida^{1,2}¹Charles Nicolle Hospital, Departement of Nephrology, Tunis, Tunisia and ²Laboratory of kidney pathology LR00SP01

BACKGROUND AND AIMS: The novel coronavirus disease 2019 (COVID-19) has now spread to the entire world as a highly contagious pandemic. The disease has proved to be more serious in populations with underlying diseases like kidney diseases, diabetes, or cardiovascular diseases. People with end-stage renal disease are known for their weakened immune systems and vulnerability to different types of infections. Recent studies have shown high prevalence and poor prognosis of severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) infection in hemodialysis patients, but its effect on peritoneal dialysis (PD) patients is still unknown.

The aim of this study was to investigate the clinical, biological, and scannographic particularities and the prognosis of SARS-CoV-2 infection in patients on PD.

METHOD: We conducted a monocentric descriptive study including all the confirmed cases of SARS-CoV-2 infection in the PD unit of the Nephrology department in Charles Nicolle Hospital. The first confirmed case was in March 2019 and our study period ended in January 2021. We used Real-Time Reverse Transcriptase polymerase chain reaction (RT-PCR) to confirm SARS-CoV-2 infection after nasopharyngeal swabbing.

RESULTS: Eight patients were included: 7 men and 1 woman. The mean age was 40.25 years-old [22-60]. All the patients were hypertensive, 2 of them were diabetics and 3 of them had cardiac pathologies: coronary heart disease in 2 patients and atrial fibrillation in the other patient. One patient had history deep vein thrombosis. All the patients were on automated PD with an average duration of PD of 40.56 months [1-84]. Two of them had history of peritonitis. Regarding the revealing symptoms of COVID-19, all the patients suffered from asthenia, a deterioration of general condition was observed in 7 patients, dry cough was also present in 7 patients, 4 patients described muscle and body aches, 3 patients reported diarrhea and vomiting, dyspnea was observed in 2 patients, only one patient reported loss of taste and smell, and fever was present in only one case. Two patients had low peripheral oxygen saturation (70% and 88%). All the patients had lymphopenia with an average of 557 [900-280]. C-reactive protein was high in 6 patients with an average of 84.7 mg/l. Chest computed tomography (CT) scan was practiced in 3 patients, it was positive in all of them with average extent of damage of 60%. Four patients were admitted in hospital and one of them in the intensive care unit (ICU) for high oxygen needs. All the patients received azithromycin, and vitamin C and D and zinc supplementation. A preventive dose of heparin was prescribed in 5 patients. No patient required intubation. No patient had thromboembolic complications. Six patients fully recovered since more than one month. Regarding the other two patients we have a follow-up of only one week since the beginning of symptoms, one of them is pauci-symptomatic and the other one is still admitted in the ICU.

CONCLUSION: According to our findings, patients on PD are not at increased risk for severe illness from COVID-19 or other adverse outcomes.