Letter to the Editor

Kidney Disease as a Clinical Predictor in the Prognosis of Patients with Covid-19

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We are living an unprecedented situación in the history of medicine, which is being produced by the COVID-19 pandemic and which has modified the situation of health systems worldwide. This situation will modify the way in which we will face respiratory diseases and in particular the way in which we will assess patients with these pathologies [1, 2].

Our country faces other great difficulties such as the enormous number of people susceptible to the disease and the scarce allocation of resources to their care by the health sector. Early detection is limited, as the signs and symptoms are similar to those of other upper respiratory tract diseases. For this reason, the recent Covid-19 disease has brought with it a real challenge both in health and in the basic aspects of daily life. Without doubt, it has become a struggle for the medical sector.

Much is still unknown about SARS-CoV-2, but early research supports the hypothesis that the severity of COVID-19 is conditioned by the hyper-inflammatory response that occurs in our body when in contact with SARS-CoV-2. The severity of the condition is related to the respiratory failure it causes, however, there are studies that do not limit pulmonary involvement. Research indicates that the access mechanism of SARS-CoV-2 to the

body is closely related to the ACE2 enzyme. Enzyme that among other tissues, can be found in the epithelium of renal tubular cells. This is the reason why there are data from patients with COVID-19 who have a great effect on kidney function and can present with Acute Renal Insufficiency (a poor prognostic factor) [3].

There are already studies in different parts of the world where it is being observed that kidney function is altered upon admission of patients with covid-19 and they are more likely to be admitted to an intensive care unit and need mechanical ventilation. Higher incidence of Acute Kidney Injury in these patients [4, 5].

This is a serious problem in our country of Mexico since it has been estimated that, at present, around 6.2 million Mexicans with diabetes have kidney failure in its different stages, without necessarily all of them knowing that they suffer from it. Up to 98% of people with chronic kidney disease due to diabetes in Mexico are in the early stages, when fortunately chronic kidney disease is still controllable and reversible [6].

It seems clear that cells with expression of ACE2 can act as target cells for the virus, and among these are tubular epithelial cells. For this reason, it appears that the kidney could be a target organ for the virus, which may cause Acute Kidney Injury in the most serious cases and with the worst prognosis [7].

In conclusion, due to the magnitude of the pandemic, it will be vitally important to pay attention to the admission values of patients hospitalized for COVID-19 such as creatinine, renal function rate, and serum electrolytes, since they will be useful for risk stratification to predict kidney injury acute and be a clinical predictor in its evolution.

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