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**Prevalence of kidney and Hepatic Dysfunction, and Outcomes in Hospitalized Patients With COVID-19 Infection in SBA region (west of Algeria)**

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**Abstract**

**Background:** large amounts of epidemiological and case study data have been available for the Coronavirus Disease 2019 (COVID-19), which suggested that the mortality was related to not just respiratory complications. Here, we specifically analyzed kidney and hepatic functions in COVID-19 patients and their relations to mortality.

**Methods:** In this prospective, retrospective, observational study, we included 345 patients with laboratory confirmed COVID-19 from one hospital in SBA; EPH situated in west of Algeria. Demographic data, symptoms, laboratory values, comorbidities, treatments, and clinical outcomes were all collected, including data regarding to kidney and hepatic functions.

**Results:** 345 COVID-19-infected patients, aged 25-95 years, were included in this study between June 2020 and october 2021. Of the 345 patients enrolled in this study, most were men (65,8%), and (34,2%) were aged 70 years and above.

On hospital admission, a remarkable fraction of patients had signs of kidney and hepatic dysfunctions, including 59% with proteinuria, 44% with glycemia ( $1.6\pm 0.8$  g), 14% with increased levels of blood urea ( $0.6\pm 1.3$ ), and 10% with increased levels of serum creatinine ( $15.9\pm 16.5$ ); and 10% with increased levels of serum AST ( $40.1\pm 25.2$ ) and 10% with increased levels of serum ALT ( $32.8\pm 27.6$ );  $k^+$  mEq/L ( $3.9\pm 0.8$ ); D-dimers ( $2360\pm 3029$ ). In our study,  $SpO_2$  was found to have a positive correlation with AST  $R=0.63$  ; with ALT  $R=0.57$  ; with  $NA^+$  mEq/L  $R=0.68$  and  $k^+$  mEq/L  $R=0.66$  and with age  $R=0.40$ .

**Conclusion:** In conclusion, COVID-19 patients have damage to liver and kidney function. ALT, AST, could be independent factors for predicting the severity of COVID-19.

**Key words :** COVID-19- kidney function - hepatic function- SBA- Algeria.