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Impact of Chronic Liver Disease on COVID-19 Mortality: The Erciyes University COVID-19 Center Experience

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Dear Editor,

We read with great interest the paper by Temel et al. (1), who reported in a retrospective study, characteristics and findings of 47 patients with severe acute respiratory syndrome coronavirus (SARS-CoV-2) disease (COVID) admitted between March and April 2020 to the Intensive Care Unit (ICU) of Erciyes University. From these, 42 patients suffered from at least one comorbidity, commonly hypertension, cardiovascular disease, and diabetes mellitus, which confirmed the findings of other studies (2). Furthermore, 13% of these patients suffered from chronic liver disease (CLD). During the follow-up, 16 patients (34%) died in the ICU (1).

Regarding the COVID-19 pandemic, there is a great interest in finding the potential relationship between SARS-CoV2 infection, its disease, and different comorbidities in order to predict prognosis.

Although limited by the small sample size published from the onset of this pandemic, several studies have shown that CLD is common in COVID patients with a worse outcome (3). These CLD cases include hepatopathies with viral, metabolic, or toxic (in particular alcohol) etiology (4). Furthermore, metabolic disorders (such as non-alcoholic fatty liver disease) are strictly associated with diabetes mellitus and hypertension (2).

The bond of SARS-CoV-2 with the angiotensin-converting enzyme 2 receptors, mainly on cholangiocytes and at lower levels on hepatocytes, contributes to liver damage (4). The consequent dysfunction of the coagulation and inflammatory role of the liver could lead to poor outcomes in COVID-19 patients with preexisting CLD. However, in this field, further investigations are mandatory.

Patients with preexisting advanced liver disease, notably cirrhosis, are at higher risk for hospitalizations and mortality. A complete evaluation of liver functionality on-admission could be useful to predict the severe course of COVID-19, helping physicians choose the tools to perform a timely diagnosis to decrease the risk of mortality (5).

Further studies should focus on the etiology and stage of disease in patients with CLD to better predict their prognosis.

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