

CLINICAL AND LABORATORY CHARACTERISTICS OF PATIENTS WITH COVID-19 INFECTED WITH THE HEPATITIS B VIRUS

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Relevance. The COVID-19 pandemic has raised concerns about its impact on various organ systems beyond the respiratory tract. Extrapulmonary manifestations, such as immune system dysregulation and hepatic injury, have been observed in COVID-19 patients. Considering the high prevalence of hepatitis B virus (HBV) infection in Uzbekistan, there is interest in studying the impact of coinfection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and HBV in patients. Coinfection refers to the presence of two or more infections in the same individual. In this case, it involves both SARS-CoV-2, the virus responsible for COVID-19, and HBV, a virus that primarily infects the liver. Coinfection can potentially complicate the clinical course and management of patients, as it may lead to interactions between the two viruses and affect the overall disease progression.

The Purpose. It is important to conduct such research to better understand the complexities of coinfection and develop appropriate strategies for diagnosis, management, and treatment in individuals with both COVID-19 and HBV infection, particularly in regions with a high prevalence of HBV like Uzbekistan.

Methods: the study involved 30 patients co-infected with both SARS-CoV-2 and HBV, 30 patients with mono-infection of SARS-CoV-2, and 20 healthy individuals. All participants were admitted to the Republican Center of Specialized Epidemiology, Microbiology, Infectious and Parasitic Diseases. During the study, blood samples were taken from all participants. These samples were then used to conduct a complete blood count and biochemical analysis. Moreover, various imaging techniques were employed, including liver computer tomography, liver dopplerography, lung radiography, and general computer tomography scans. By analyzing the blood samples and conducting imaging tests, the researchers aimed to gather comprehensive data on the health status of the participants. The comparison between co-infected patients, mono-infected SARS-CoV-2 patients, and healthy individuals can provide insights into the potential impacts of SARS-CoV-2 and HBV co-infection on various health parameters.

Results. The information you provided suggests that co-infection with both SARS-CoV-2 and HBV did not significantly affect the overall outcome of COVID-19. However, it appears that patients with co-infection experienced more severe monocytopenia (reduced levels of monocytes) and thrombocytopenia (reduced levels of platelets), along with impaired liver function related to albumin production and lipid metabolism. While there were no significant changes observed in computed tomography (CT) scans, bilateral pneumonia (inflammation of both lungs) was clearly evident in the CT scans of the lungs. It is important to note that co-infection with multiple viruses can complicate the clinical picture and potentially worsen certain aspects of the disease.

Conclusion. The statement suggests that chronic HBV infection itself does not increase the risk of severe outcomes in patients with COVID-19. However, the data from the study indicate that coinfection with both SARS-CoV-2 and HBV may lead to a higher level of dysregulation of host functions at the onset of COVID-19. The term "dysregulation of host functions" typically refers to disruptions or abnormalities in the normal functioning of the body's systems and processes. Based on these findings, the statement emphasizes the importance of exercising caution when treating patients who are co-infected with both SARS-CoV-2 and HBV. This suggests that healthcare providers should consider the potential interactions and effects of both viruses when managing and treating individuals with co-infection.

References:

1. Atamukhamedova, D., and N. Djalalova. "EPIDEMIOLOGICAL CHARACTERISTICS OF PATIENTS WITH VIRAL HEPATITIS B." *Science and innovation* 3.D3 (2024): 292-295.
2. Бурибаева, Бахринисо Исабаевна, and Тожигул Ахмедовна Ниязова. "Изменения в деятельности сердца при хронических вирусных гепатитах." *Молодой ученый* 37 (2017): 42-44.
3. Арипходжаева, Г. З., А. Х. Хайруллина, and С. А. Рашидова. "Показатели липопероксидации, антиоксидантной системы и эндогенной интоксикации при хроническом вирусном гепатите С во взаимосвязи с уровнем цитолиза." *Журнал теоретической и клинической медицины* 5 (2015): 120-122.