


The relationship between SARS-CoV-2 infection and cholangiopathy

Cemalettin Durgun 

Department of General Surgery, Memorial Dicle Hastanesi, Diyarbakır, Turkey

Coronavirus disease 2019 (COVID-19) has been in our lives for about a year, with new clinical features being discovered every day. Although COVID-19 patients typically present with respiratory symptoms, some patients experience gastrointestinal (GI) symptoms such as diarrhea, nausea, vomiting, and loss of appetite, according to our current knowledge. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) can infect the GI tract via its viral receptor angiotensin-converting enzyme 2 (ACE2), and there is growing evidence of a possible fecal-oral transmission route.^[1,2] The aim of this study was to evaluate the literature in terms of gallbladder involvement in COVID-19 patients. However, there is currently insufficient literature on gallbladder involvement. The incidence of this complication is uncertain because it is difficult to diagnose.

Although infectious involvement of the bile ducts is most commonly caused by bacterial agents, it can also be induced by agents such as *Brucella* spp. and, in rare cases, viral agents.^[3,4] Viral cholangitis occurs less frequently than viral hepatitis. Hepatotropic viruses (A, B, C, and E) and systemic viral diseases can also cause cholangitis in varying degrees. Human immunodeficiency virus (HIV) and other systemic viral infections, particularly those from the herpesvirus family, have been related to cholangitis in both immunosuppressed

and immunocompetent patients.^[4] However, its relationship with SARS-CoV-2 is still unclear. Roth et al.^[5] reported three adult post-COVID-19 patients with severe cholestasis, and Zhai et al.^[6] reported a patient with acute obstructive suppurative cholangitis. There are also cases of primary biliary cholangitis and progressive cholangiopathy in the literature.^[7,8]

In conclusion in terms of this disease, which may cause mortality or morbidity, urgent research is needed into the mechanism of gallbladder involvement, disease incidence, course, treatment, and prevention, both during the course of severe COVID-19 and in post/long COVID-19 patients. Furthermore, some patients with cholangiopathy should be cautious of missed COVID-19 infection.

Declaration of conflicting interests

The author declared no conflicts of interest with respect to the authorship and/or publication of this article.

Funding

The author received no financial support for the research and/or authorship of this article.

REFERENCES

1. Alırvacı I, Alkan Çeviker S. COVID-19 Karaciğer tutulumu ve altta yatan karaciğer hastalığı olanlarda hastalık seyrinin irdelenmesi: Derleme. *J Biotechnol & Strategic Health Res* 2020;4:206-11.
2. Bartoli A, Gitto S, Sighinolfi P, Cursaro C, Andreone P. Primary biliary cholangitis associated with SARS-CoV-2 infection. *J Hepatol* 2021;74:1245-6.
3. Alkan Çeviker S, Elmaslar Mert HT, Gedik MA. Akut kolesistit ile başvuran atipik bruselloz olgusu. *Sakarya Tıp Dergisi* 2019;9:702-5.
4. Gupta E, Chakravarti A. Viral infections of the biliary tract. *Saudi J Gastroenterol* 2008;14:158-60.
5. Roth NC, Kim A, Vitkovski T, Xia J, Ramirez G,

Received: March 25, 2021

Accepted: December 26, 2021

Published online: January 28, 2022

Correspondence: Cemalettin Durgun, MD.
e-mail: drdurgun@gmail.com

Cite this article as:

Durgun C. The relationship between SARS-CoV-2 infection and cholangiopathy. *D J Med Sci* 2021;7(3):339-340.

- Bernstein D, et al. Post-COVID-19 Cholangiopathy: A novel entity. *Am J Gastroenterol* 2021;116:1077-82.
6. Zhai LL, Xiang F, Wang W, Wu L, Ye L, Yao LC, et al. Atypical presentations of coronavirus disease 2019 in a patient with acute obstructive suppurative cholangitis. *Clin Res Hepatol Gastroenterol* 2020;44:e135-e140.
 7. Keta-Cov research group. Electronic address: vincent.mallet@aphp.fr; Keta-Cov research group. Intravenous ketamine and progressive cholangiopathy in COVID-19 patients. *J Hepatol* 2021;74:1243-4.
 8. Bartoli A, Gitto S, Sighinolfi P, Cursaro C, Andreone P. Primary biliary cholangitis associated with SARS-CoV-2 infection. *J Hepatol* 2021;74:1245-6.