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# Gastroenterología y Hepatología

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## LETTER TO THE EDITOR

### Billiary casts in post-COVID-19 cholangiopathy<sup>☆</sup>

### Cilindros biliares en la colangiopatía post-COVID-19

Dear Editor,

We have read with great interest the scientific letter of Vega et al.,<sup>1</sup> which describes six cases of the novel clinical entity named post-COVID 19 cholangiopathy. This is the name given to the secondary sclerosing cholangitis following a severe COVID-19 infection,<sup>2</sup> as per first reported in two seminal papers comprised of 15 cases published in 2021 in the American Journal of Gastroenterology.<sup>3,4</sup> We have also published a case of this clinical entity in Portuguese in the beginning of 2021.<sup>5</sup> With the Gamma variant in Southern Brazil, which has hit hard our population and became a major health crisis,<sup>6</sup> we have been managing many cases of post-COVID 19 cholangiopathy from 2020 to 2022.

One case that left a mark in our service was of a male patient, 50-years-old, admitted to the hospital because of severe COVID-19 infection, requiring prolonged mechanical ventilation, hemodialysis and long-term sedation with ketamine, fentanyl, midazolam, propofol and atracurium. He received a 8-week course of meropenem, polymyxin B and amikacin for infective endocarditis and muscle and liver abscesses caused by *Klebsiella pneumoniae* carbapenemase (KPC). During hospital stay, he presented elevated Gamma-glutamyl transferase (GGT = 2587 U/L) and alkaline phosphatase (AP = 1436 U/L), without jaundice. Magnetic resonance imaging cholangiography showed intra-hepatic sclerosing cholangitis and a dilated choledocum, with no signs of lithiasis (11 mm). Ursodeoxycholic acid was started (15/mg/kg daily), with almost no improvement (GGT 1845 U/L and AP 1022 U/L) after a couple of months. After a few months, he presented upper abdominal pain and



**Figure 1** Left – endoscopic retrograde cholangiopancreatography (ERCP) with removal of a biliary cast. Right – cast with the format of extra-hepatic biliary tree.

was diagnosed with acute pancreatitis. He underwent endoscopic retrograde cholangiopancreatography (ERCP), which identified a cast in the format of the external biliary tract, which was removed (Fig. 1), with improvement of symptoms and laboratory.

In the six cases reported by Vega et al.,<sup>1</sup> none of the patients underwent an ERCP. In our clinical experience with the Gamma variant in Southern Brazil, we have treated many cases of this novel entity, every one of them with the same choledochal cast removed via ERCP. In our first case, which we published in Portuguese in the beginning of 2021, the same cast was removed as the case we have described above; even intra-hepatic lithiasis was diagnosed via percutaneous trans-hepatic cholangiography.<sup>5</sup>

Therefore, we believe the diagnosis and management of post-COVID 19 cholangiopathy requires an ERCP, especially in the presence of a dilated choledocum in imaging studies.

## Ethics

The patient has agreed to the reporting of his case.

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<sup>☆</sup> Comment on: Pizarro Vega NM, Valer Lopez-Fando P, de la Poza Gómez G, Piqueras Alcol B, Gil Santana M, Ruiz Fuentes P, Rodríguez Amado MA, Bermejo San José F. Secondary sclerosing cholangitis: A complication after severe COVID-19 infection. *Gastroenterol Hepatol*. 2022 May 13;S0210-5705(22)00144-3. [doi:10.1016/j.gastrohep.2022.04.003] [PMID: 35569544] [PMCID: PMC9188449].

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Jonathan Soldera<sup>a,b,c,\*</sup>, Raul Angelo Balbinot<sup>d,e</sup>,  
Silvana Sartori Balbinot<sup>d,e</sup>

<sup>a</sup> Associate Professor, Clinical Gastroenterology, School of Medicine, Universidade de Caxias do Sul, Brazil

<sup>b</sup> Master's in Medicine: Hepatology, Universidade Federal de Ciências da Saúde de Porto Alegre, Brazil

<sup>c</sup> Doctoral Student, Pathology, Universidade Federal de Ciências da Saúde de Porto Alegre, Brazil

<sup>d</sup> Titular Professor, Clinical Gastroenterology, Faculty of Medicine, Universidade de Caxias do Sul, Brazil

<sup>e</sup> PhD, Gastroenterology, Universidade de São Paulo, Brazil

\* Corresponding author.

E-mail address: [jonathansoldera@gmail.com](mailto:jonathansoldera@gmail.com) (J. Soldera).