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Reply to the Letter to the Editor “Pathogenesis of pneumoperitoneum in COVID-19 patients”[☆]



Réplica a la Carta al Director «Etiopatogenia de neumoperitoneo en pacientes COVID-19»

To the Editor,

As stated by Cienfuegos et al.,¹ the incidence of non-surgical spontaneous pneumoperitoneum in positive COVID-19 patients is becoming more frequent as the incidence of infection grows exponentially,^{2,3} in addition to other types of gastrointestinal manifestations. Inflammatory bowel processes are being described related with direct damage to the mucosa mediated by receptors as well as ischemic processes secondary to splanchnic thrombosis.^{4,5}

In our patient,⁶ the evolution of fibrinogen ranged from 370 mg/dL upon admission to the ICU and 180 mg/dL upon discharge. As for D-dimer levels, these peaked at 35.05 mg/L and had dropped to 2.83 mg/L at discharge.

Based on these parameters, we cannot categorically rule out that spontaneous pneumoperitoneum was caused by direct damage to the mucosa or by intestinal ischemia secondary to splanchnic thrombosis, especially due to the limited number of cases published to date. Even so, this seems unlikely, since the CT scan in our case did not show intestinal pneumatosis, and tomography is a very sensitive test.

In the original publication by Cienfuegos et al.,² it is striking that the patient initiated enteral nutrition (EN) on day 2 of the ICU stay. On day 8, with no signs of ischemia, such as elevated lactic acid, the patient had diarrhea, abdominal distension, foul-smelling discharge from the nasogastric (NG) tube, and a CT scan detected intestinal pneumatosis (IP). This required the cessation of enteral nutrition, after which the symptoms were resolved. Several cases of IP associated with EN^{7,8} have been published in the literature, with complete resolution of symptoms after its withdrawal, so the direct association with COVID-19 infection is not guaranteed in this case.

The same occurred in the second published case report.³ The finding of spontaneous pneumoperitoneum occurred in the context of a positive COVID-19 patient with no associated respiratory symptoms. It cannot be ruled out that the pneumoperitoneum and intestinal pneumatosis were due to viral infection, but it would be interesting for the authors of the article to rule out other common causes of spontaneous pneumoperitoneum, such as cystic intestinal pneumatosis.^{9–11} In fact, the authors of the article acknowledge that more case series are required to support this statement.

Thus, it is clear that COVID-19 infection involves intestinal manifestations,¹² which requires further study in large series. Even so, we must bear in mind that many of these manifestations may be due to prevalent diseases and not related to the viral infection. In short: not everything that happens in COVID-19-positive patients is due to the infection itself.

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