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## The dilemma in the management of suspected upper GI bleeding in patients with COVID-19 pneumonia



To the Editor:

We read with interest the article entitled “Management of upper GI bleeding in patients with COVID-19” by Cavaliere et al,<sup>1</sup> published recently in *Gastrointestinal Endoscopy*. The authors reported a case series of 6 patients who presented with coronavirus disease 2019 (COVID-19) and upper GI bleeding (UGIB). Cavaliere et al<sup>1</sup> concluded that COVID-19 patients with UGIB could be treated conservatively without endoscopy because they responded to conservative treatment in 24 hours. This study is very interesting and important; however, we would like to put forth some suggestions.

First, endoscopy, which could identify the cause of UGIB,<sup>2</sup> was not performed in this study, and the exact cause of hematemesis or melena is still unclear. Indeed, not all patients with hematemesis or melena had “true” UGIB episodes. Some coffee-ground hematemesis episodes are due to pulmonary embolism, myocardial infarction, and renal failure.<sup>3</sup> Also, the intake of substances, including iron supplements, bismuth subsalicylate, and foods such as blood soup, can lead to black stools similar to melena.<sup>4</sup> It is unknown whether the patients had consumed the above-mentioned medications or foods before admission. In addition, the nature of hematemesis (bloody, fresh coffee-ground, or old) is not reported.

Second, the presence of coexisting diseases such as liver cirrhosis, renal disease, *Helicobacter pylori* infection, and history of variceal bleeding, peptic ulcers, GI tumor, severe vomiting, and use of nonsteroidal anti-inflammatory drugs or antiplatelet medications was unclear. Many studies<sup>5,6</sup> have demonstrated that patients with severe COVID-19 have subclinical or obvious coagulation abnormalities with increased risk of thromboembolic disease. However, prothrombin time, activated partial thromboplastin time, and international normalized ratio were not reported in Table 1 of the article. It should be noted that detailed medical history taking and elaborate laboratory tests are very important to diagnose the cause of UGIB when endoscopy is not performed.

Third, we suggest that the authors use the Horibe GI bleeding prediction score (HARBINGER),<sup>7</sup> which is simple and accurate for triage in patients with suspected upper GI bleeding. In a study of 1486 patients with suspected UGIB, the HARBINGER score was more accurate (area under the curve [AUC] 0.76) than both the Glasgow-Blatchford Score (GBS) (AUC 0.68) and AIMS65 (AUC 0.54). Moreover, the HARBINGER is the first

score used when neither the presence of UGIB nor the variceal or nonvariceal cause of the UGIB could be identified. In a previous study involving 3012 patients, a GBS of  $\geq 7$  was shown to predict with greater accuracy whether or not a patient requires endoscopy.<sup>8</sup> However, all of the GBS were  $>7$  in this study, which suggests that the GBS was not accurate in this case series.

Fourth, if available, magnetically assisted capsule endoscopy (MACE) could be safely used to examine the cause of acute UGIB. A recent study<sup>9</sup> showed that MACE had a higher diagnostic performance for focal lesions and could correctly identify the cause of UGIB, with a better tolerance than EGD, and a lower risk of aerosol transmission<sup>10</sup> than EGD in theory.

Finally, this case series of UGIB in COVID-19 patients can reflect the “real-world” findings; however, the medical history and blood tests warrant further study. Because the sample size is small, a large-scale study should be conducted in the future for assessing the risk for COVID-19 patients with suspected UGIB. Innovative noninvasive methods for triage before endoscopy during the COVID-19 pandemic needs further exploration.

## DISCLOSURE

*All authors disclosed no financial relationships.*

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## Safe endoscopy during the COVID-19 pandemic



To the Editor:

We read with great interest the article by Repici et al<sup>1</sup> regarding the recommendations for the department of endoscopy during the COVID-19 outbreak. Here, we report our experience with >18,000 procedures per year in a tertiary care referral center in Brescia, in northern Italy, which has been at the epicenter of the COVID-19 outbreak in Europe, and a COVID-19 hospital since the beginning of March. During the COVID-19 outbreak, especially during the lockdown, endoscopy unit activities were limited to emergency and oncologic procedures to preserve the health of both patients and operators.

Seven physicians and 19 nurses were dispatched to the COVID-19 department. The remaining 4 physicians and 7 nurses were dedicated to the endoscopy unit. All procedures performed between March 1 and May 1, 2020, were considered high-risk procedures because of the dramatic incidence of infection in that period and in that specific geographic area (Fig. 1). Because of this and according to the recommendations by Repici et al, all operators wore high-risk personal protective equipment (including hairnet, 2 pairs of gloves, water-resistant gown, FFP2/3 respirator, face shield) and observed proper hand hygiene during donning and doffing.

During that time, 375 procedures were performed (166 EGDs, 144 colonoscopies, 21 ERCPs, 23 EUSs, 16 PEGs, 5 video capsule endoscopies) in non-negative-pressure rooms. All patients wore surgical masks (except during upper endoscopy) and gloves. Of those patients, 23 had established COVID-19 positive test results and underwent endoscopic procedures in a dedicated room. All rooms were disinfected and/or decontaminated at the end of each procedure.

No case of transmission of infection in the endoscopy unit was recorded during the observation period and for 15 days after May 1 between operators and patients. After May 15, the hospital organized extensive serologic screening among the staff involved in the endoscopy unit confirming, the absence of infection (IgM and IgG anti-COVID-19: negative). In conclusion, the recommendations Repici et al<sup>1</sup> seem to provide a safe and effective method to prevent SARS-CoV-2 diffusion in the department of endoscopy.

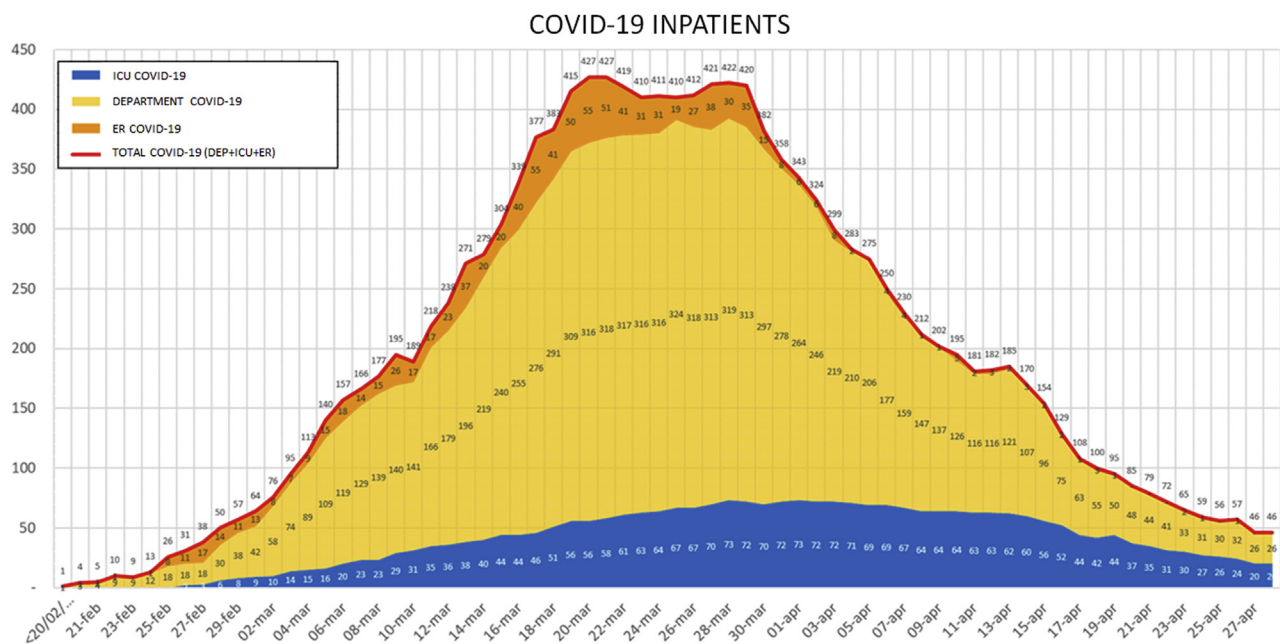


Figure 1. COVID-19 inpatients during SARS-CoV-2 outbreak in Brescia, Italy.