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dysfunction as an initial presentation of children with multisystem inflammatory syndrome in children (MIS-C) and confirming our initial findings with an even higher prevalence of gastrointestinal (GI) symptoms detected in patients with this condition.¹ More recently, our group has identified that hepatitis is also correlated with increased disease severity in patients with MIS-C.² In agreement with the authors, the presence of severe GI presentations, such as those mimicking appendicitis, have been found and been presented also in prior reports.^{3,4} The authors also raise an interesting point about the prevalence of GI symptoms in MIS-C compared with acute coronavirus disease 2019 (COVID-19) infection without MIS-C and have stated literature evaluating a large number of children with COVID-19/non-MIS-C to have much lower rates of GI symptoms.⁵

There have been no studies thus far, however, directly comparing GI symptoms in MIS-C patients with sex-matched patients with COVID-19/non-MISC. Several of the authors of our original article (Margolis, Martinez, Miller, and Cantor) have recently collaborated with another large tertiary medical center in New York City (Montefiore Medical Center) to undertake this evaluation. Specifically, we sought to evaluate the phenotypic differences between MIS-C- and non-MIS-C-afflicted children with COVID-19 (with a paper on liver manifestations submitted). In a preliminary review of these data, including 71 patients with MIS-C and 220 patients with COVID-19 admitted to Columbia or Montefiore between March 14, 2020, and June 30, 2020, we found that 87.3% of patients with MIS-C demonstrated GI symptoms. In contrast, 54.5% of patients with COVID-19 had GI symptoms. Interestingly, although this population was sex matched, patients with MIS-C were younger. Although this finding supports the current literature showing that GI symptoms are less common in COVID-19 without MIS-C, they may be more common than previously shown when compared to a matched population with MIS-C.

In conclusion, we agree with the authors of this letter in that GI conditions in children with MIS-C should be considered. We also, however, further suggest that GI conditions in children with COVID-19 without MIS-C may be more common than previously reported.

JONATHAN MILLER

MERCEDES MARTINEZ

KARA MARGOLIS

Department of Pediatrics

Division of Pediatric Gastroenterology, Hepatology and Nutrition

Morgan Stanley Children's Hospital

Columbia University Irving Medical Center

New York, New York

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Conflicts of interest

The authors disclose no conflicts.

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The Dilemma in the Management of Gastrointestinal Bleeding During the COVID-19 Pandemic



Dear Editors:

We have read with great interest the article entitled “Effect of the COVID-19 Pandemic on Outcomes for Patients Admitted with Gastrointestinal Bleeding in New York City” by Dr. Kim and colleagues.¹ Their study reviewed 211 patients admitted with gastrointestinal (GI) bleeding and examined the effect of the Coronavirus Disease 2019 (COVID-19) pandemic in terms of hospital length of stay, differences in blood product transfusion requirement, and rate of endoscopy performed during hospitalization. Results showed that patients admitted with GI bleeding presented with significantly lower hemoglobin ($P = .0188$) and had increased length of hospital stay (adjusted odds ratio 2.46, 95% confidence interval 1.13–5.34, $P = .023$). Admitted patients were also significantly associated with receiving at least 1 blood transfusion (adjusted odds ratio 2.86; 95% CI, 1.25–6.55; $P = .013$). Their analysis showed several implications on patients with GI bleeding due to the massive reorganization to hospital operations during the pandemic. The patients' reluctance to present to the hospital could have resulted in lower hemoglobin rates. The higher odds of transfusion, longer hospital stay, and lower odds of undergoing endoscopy are likely due to the prioritization of conservative medical management and higher thresholds to perform aerosol-generating procedures. Although we recognize that changes in the hospital operations are significant during the pandemic, we aim to highlight the quality of GI bleeding management being given to the patients that could result in these clinical outcomes. The threshold for doing endoscopy in patients with GI bleeding is also important.

The COVID-19 pandemic has brought about dilemmas in the management of patients with GI bleeding. Although endoscopy can conveniently serve both as a diagnostic and therapeutic tool, the risk of performing the procedure and transmitting the virus may outweigh the benefit in patients with COVID-19. This is true for all endoscopic procedures, hence the markedly limited cases done in endoscopy centers worldwide. Apparently, acute GI bleeding is considered an emergent procedure in the guidelines of different GI and endoscopy societies, hence the dilemma if it needs to be done on a case-by-case basis.²

In general, patients admitted with acute upper GI bleeding should undergo early endoscopy within 24 hours of presentation.³ However, by practice, the priority has still been given on conservative management for patients presenting with GI bleeding. Patients are started on intravenous fluids and proton pump inhibitors. Octreotide infusions are given to patients with suspected or known liver disease while the coagulopathies are corrected. Patients are usually put to nothing per ore and blood transfusion is facilitated as necessary. With these measures, the clinical condition of patients and their hemoglobin levels are frequently assessed. Unfortunately, no specific guideline exists in the treatment of GI bleeding during the pandemic, but by practice, the basic principles of resuscitation and optimizing medical management are observed.⁴ In addition, no concrete guideline has set any threshold for doing the endoscopy in patients presenting with GI bleeding, but it is generally recommended if a patient does not respond to conservative management within 24 hours. However, this threshold can be arbitrary based on emerging experience.

The timing of endoscopy is controversial, as the available evidence varies on pre-pandemic studies. Although most studies favor early endoscopy, there are some that have described on poorer outcomes. A recent study by Lau et al⁵ showed that delaying endoscopy for 24 hours does not affect 30-day mortality compared with doing earlier endoscopy.⁵ Similarly, a case series by Cavaliere et al⁶ has shown that 6 patients with COVID-19 responded to conservative management and did not require an endoscopic procedure during their clinical course.⁶ Given this dilemma in the endoscopic management of GI bleeding, aside from clinical judgment, we think that decisions could be better made using prognostic tools such as the Glasgow-Blatchford score for the pre-endoscopic risk stratification of patients.⁷

Unfortunately, COVID-19 will be with us for a long time and it will continue to have its deleterious effects on GI bleeding management. There will definitely be cases of GI bleeding in the clinics, but to avoid unnecessary risks of viral exposure on early endoscopy, we suggest going back to the basic principles of optimizing conservative management up to 24 hours. Exceptions to this are cases of severe bleeding in which clinical judgment dictates a more aggressive management or if the patient is at high risk of further bleeding or death based on risk stratification. With the latter, we suggest on future studies regarding the use of these tools in the context of the pandemic, as it may be the triaging model we are missing in this dilemma.

ENRIK JOHN T. AGUILA

IAN HOMER Y. CUA

NIKKO THEODORE V. RAYMUNDO

Institute of Digestive and Liver Diseases

St. Luke's Medical Center

Global City, Philippines

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Reply. We thank Aguila et al for their interest in our article and appreciate their perspective on the management of gastrointestinal bleeding during the coronavirus disease 2019 (COVID-19) pandemic.

We agree that the pandemic has caused significant dilemmas for risk-stratification of patients presenting with gastrointestinal (GI) bleeding. The risks of staff exposure and depletion of personal protective equipment need to be weighed against the benefits of endoscopy on a case-by-case basis using clinical judgement. As reported in our study, conservative medical management, including blood product transfusions and proton pump inhibitor use, was emphasized early in the pandemic and inpatient endoscopy volume significantly decreased.¹

A recent study by Blackett et al² found that, among patients undergoing endoscopic procedures in New York City hospitals during the first wave of the pandemic, COVID-positive patients were more likely to have an indication of GI bleeding at 41.7% compared with 29.8% of COVID-negative patients and 24.1% of untested patients. Endoscopies in COVID-positive patients were also more likely to have a hemostatic intervention compared with COVID negative patients (adjusted odds ratio, 2.90; $P = .041$). These findings likely reflect the higher clinical threshold to pursue endoscopy in COVID-positive patients.

A recent randomized trial found that delaying endoscopy for ≤ 24 hours does not affect 30-day mortality compared with earlier endoscopy,³ but it is difficult to adapt these guidelines during the pandemic because patients seem to be presenting later in their disease course. In another study from our institution by Laszkowska et al,⁴ the presence of GI symptoms in COVID-positive patients was associated with a longer time from symptom onset to presentation for admission compared with COVID-positive patients without GI symptoms (median, 7.4 days vs 5.4 days; log-rank $P < .01$). In our study, we found that patients with GI bleeding during the pandemic presented with more severe laboratory abnormalities, which may reflect patients' reluctance to seek medical care unless symptoms worsen. The ongoing COVID-19 pandemic has presented new challenges in the management of GI bleeding, and future studies are needed to develop evidence-based guidelines relevant to this specific population.