

Safety of Endoscopy in Patients With Inflammatory Bowel Disease During the COVID-19 Pandemic

To the Editor,

SARS-CoV-2, the causative agent for the COVID-19 pandemic, is affecting the health care system globally with a major economic impact. As of June 14, 2020, more than 7.5 million cases were reported with more than 450,000 deaths worldwide. The United States is a major epicenter of the disease in the Western world, with approximately one-third of global cases and deaths. Less is known about the disease specifics in the inflammatory bowel disease (IBD) population.¹

Patients with IBD are usually on biologics or immunomodulators that may increase the risk of infections. They also undergo endoscopies for flares and surveillance, which can theoretically increase their risk of health care–related exposures. Although the IBD population is at increased risk of opportunistic infections, the IBD Elite Union, which incorporates the 7 largest IBD referral centers in China with more than 20,000 patients with IBD, has reported no cases of COVID-19.²

Initial studies from Italy and China, which were first impacted by the pandemic, showed a very low risk of COVID-19 transmission in patients with IBD.^{3,4} Endoscopy is an aerosol-inducing procedure, and there is proximity among patients and endoscopists during procedures that may increase the risk of disease transmission by mutual airborne spread. A recently published study from Italy reported that

endoscopy was relatively safe for both patients and medical personnel when using adequate protective measures.⁵ However, the safety of endoscopy has not been studied in patients with IBD. Our aim was to study the incidence and outcome of COVID-19 infection among patients with IBD undergoing endoscopic evaluation on an emergent basis.

All consecutive patients with IBD (ulcerative colitis [UC] or Crohn disease [CD]) and aged >18 years undergoing endoscopy procedures between March 1 and April 30, 2020, in the IBD unit at Advent Health, Orlando, Florida, were included in the study. A protocol with a specific list of questions ([Supplementary Table 1](#)) was used to identify patients who had developed fever, cough, or respiratory symptoms or other symptoms reported by the Centers for Disease Control and Prevention or were diagnosed as COVID-19-positive within 2 weeks after endoscopic procedures. The patients were contacted over phone by research nurses and coordinators, and surveys were completed. Institutional review board approval was obtained for the study.

A total of 31 patients underwent colonoscopy during this period. Of the 31 patients, 30 patients (11 with UC and 19 with CD) returned the survey. Patient mean age was 42.5 years. There was a total of 17 women and 13 men. Baseline patient characteristics are shown in [Supplementary Table 2](#). We used physician global assessment and validated endoscopic indices (Mayo endoscopic score for UC and simple endoscopic score for CD) to assess disease severity at the time of the procedure.

All patients underwent colonoscopy/lower gastrointestinal examination on an emergent basis. Emergent procedures were conducted for patients with significant symptoms not responding to medical treatment (n = 28) or for therapeutic indications such as dilations (n = 1) or endoscopic sinusotomy (n = 1) for pouch sinus following ileal pouch anal anastomosis. The majority of our

patients (24/30) were on IBD-specific drug therapies (ustekinumab, n = 5; vedolizumab, n = 5; infliximab, n = 9; adalimumab, n = 3; vedolizumab and tofacitinib, n = 1; clinical trial for a Janus kinase inhibitor, n = 1). The rest were on 5-aminosalicylate drugs (n = 5) and antibiotics (n = 1). One patient was on low-dose corticosteroids (20 mg) to help with disease flare at the time of colonoscopy.

None of the patients required hospitalization after endoscopy. Of the 30 patients, 1 patient reported sore throat, which was self-limited, and was not tested for COVID-19. One more patient with UC and primary sclerosing cholangitis reported low-grade fever for a day, which resolved. She was also not tested for COVID-19. Three more patients were tested for COVID-19 more than 2 weeks after the procedure and were negative. None of our other patients developed upper respiratory tract symptoms or tested positive for COVID-19 up to 2 weeks following the endoscopic procedure. The approximate rate of COVID-19 infection in the local population was around 3% during the study period.

In our small case series, endoscopic examination done in patients with IBD did not increase the risk of exposure to COVID-19, with the use of appropriate precaution measures. We instituted the protocol for prescreening all patients with temperature checks and for symptoms of COVID-19. All providers and staff wore face masks/surgical masks. In the procedure room, N95 masks were used by all the personnel in the room. Only 1 patient reported sore throat, which was self-limited, and 1 patient developed low-grade fever. Both were not tested for COVID-19. None of the patients developed symptoms of COVID-19 or tested positive when followed up to 14 days from the time of colonoscopy.

The majority of our patients were on therapy with biologics, which may alter the immune system, especially therapy involving cytokines. Although the immune system may

be compromised in these patients, it is unknown whether this possibility will increase their risk of specifically acquiring COVID-19 or of the severity of illness. It is unclear whether biologics used in IBD may have an advantageous role. In fact, in a large international registry of patients with IBD with COVID-19, increasing age, comorbidities, and corticosteroids are associated with severe COVID-19 infection, but the use of biologics is not.⁶ Based on the available recommendations from limited data, we continued our patients on their current therapy, including biologics and other immunosuppressants. We did not test any asymptomatic patients for the presence of SARS-CoV-2 during our study period because of the lack of available resources. Our data suggest that patients with IBD can safely undergo endoscopic evaluation if needed.

SUPPLEMENTARY DATA

Supplementary data are available at *Inflammatory Bowel Diseases* online.

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Conflicts of interest: U. Navaneethan and B. Shen are consultants for AbbVie and Takeda. U. Navaneethan is a consultant for Pfizer and Janssen outside of the submitted work.

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REFERENCES

1. Han C, Duan C, Zhang S, et al. Digestive symptoms in COVID-19 patients with mild disease severity: clinical presentation, stool viral RNA testing, and outcomes. *Am J Gastroenterol*. 2020;115:916–923.
2. Mao R, Liang J, Shen J, et al.; Chinese Society of IBD, Chinese Elite IBD Union; Chinese IBD Quality Care Evaluation Center Committee. Implications of COVID-19 for patients with pre-existing digestive diseases. *Lancet Gastroenterol Hepatol*. 2020;5:425–427.
3. Bezzio C, Saibeni S, Variola A, et al; Italian Group for the Study of Inflammatory Bowel Disease (IG-IBD). Outcomes of COVID-19 in 79 patients with IBD in Italy: an IG-IBD study. *Gut*. 2020;69:1213–1217.
4. An P, Ji M, Ren H, et al. Prevention of COVID-19 in patients with inflammatory bowel disease in Wuhan, China. *Lancet Gastroenterol Hepatol*. 2020;5:525–527.
5. Repici A, Aragona G, Cengia G, et al; ITALIAN GI-COVID19 Working Group. Low risk of covid-19 transmission in GI endoscopy. *Gut*. Published online April 22, 2020. doi: 10.1136/gutjnl-2020-321341.
6. Brenner EJ, Ungaro RC, Gearry RB, et al. Corticosteroids, but not TNF antagonists, are associated with adverse COVID-19 outcomes in patients with inflammatory bowel diseases: results from an international registry. *Gastroenterology*. Accepted manuscript. Published online May 8, 2020. doi: 10.1053/j.gastro.2020.05.032.