

Joint Guidance from SGEI, ISG and INASL for Gastroenterologists and Gastrointestinal Endoscopists on the Prevention, Care, and Management of Patients With COVID-19



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Coronavirus disease 2019 (COVID-19), which started in December 2019 in China, has resulted in a pandemic leading to significant morbidity and mortality across the globe. Although it mainly causes respiratory symptoms, respiratory failure and death due to multiorgan failure, there is evolving evidence to suggest gastrointestinal (GI) and liver involvement by this virus. Owing to this, health-care professionals taking care of GI and liver diseases are also at an increased risk of getting exposed. Hence, there is a need for protocols to be prepared to guide the handling of COVID-19 patients by the GI and liver specialists, as well as to manage the pre-existing GI and liver diseases during the ongoing pandemic. We present here the guidelines prepared jointly by the three Indian professional bodies in the field of GI diseases, namely the Society of Gastrointestinal Endoscopy of India, Indian Society of Gastroenterology, and Indian National Association for the Study of the Liver. (J CLIN EXP HEPATOL 2020;10:266–270)

Coronavirus disease 2019 (COVID-19), caused by infection with severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2; known also as novel coronavirus 2019) is currently occurring as a pandemic. It first appeared in December 2019 in Wuhan city, located in the Hubei region of China, and was soon followed by a quick spread to nearby provinces of China and to neighboring countries. As of March 30th, 2020, the infection has been reported from 198 countries, and has affected more than 700,000 people worldwide, with more than 33,000 deaths (<https://www.worldometers.info/coronavirus/>).

COVID-19 most often presents with a recent-onset fever, dry cough, weakness, and sore throat.¹ Up to 50% of patients may report shortness of breath, and a few develop adult respiratory distress syndrome. Nasal symptoms are infrequent. Asymptomatic infection can occur; however, in the absence of a serological test, its frequency remains unclear. The case fatality rate has been reported between 1% and 3.5% but may depend on case definition; for instance, if milder cases or asymptomatic persons are tested, diagnosed and included in the case count, the mortality rate would appear to be low. Human-to-human transmission occurs primarily

via direct contact through air droplets. The mean incubation period is 5 (range: 0–14) days. Spread from asymptomatic persons in the late incubation period can occur; however, most of the viral spread appears to occur from symptomatic persons. Older people, especially those with comorbidities and the immune compromised individuals are at particular risk of severe disease and death.

Gastrointestinal (GI) symptoms, including nausea and/or diarrhea have been reported to occur in 5%–50% of infected individuals in various series.^{1–3} Liver enzymes are abnormal in a quarter of cases.⁴ Viral RNA is detectable in stool and may persist for longer than the acute illness; however, whether this represents presence of viable virus and risk of transmission remains unclear. Meanwhile, it appears prudent to consider GI secretions as infective, and capable of causing feco-oral transmission and be associated with potential for transmission of the virus during endoscopic procedures from patient to patient or from a patient to health-care workers (HCWs).

In GI endoscopy units, several staff members, including physicians and other HCW often work at very short physical distance from patients. Furthermore, they are frequently exposed to splashes, air droplets, mucus or saliva during GI endoscopy procedures (endoscopy should be considered an aerosol generating procedure). The risk of exposure may be particularly high during intubation with an endoscope, which may induce coughing or violent retching, and during placement of an endotracheal tube, if anesthesia is required de novo or if a respiratory complication occurs during endoscopy.

Keywords: COVID-19, guidance, endoscopy, liver, India

Received: 30.3.2020; **Accepted:** 30.3.2020; **Available online** 3 April 2020

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<https://doi.org/10.1016/j.jceh.2020.04.001>

The best personal protection techniques currently recommended at all times are as follows.^{5,6}

- (i) Frequent and thorough hand washing (with soap and water or antiseptic hand wash solutions, preferably those containing 60% alcohol),
- (ii) Avoiding of touching one's face, mouth, or nose with unwashed hands,
- (iii) Following cough and sneezing etiquette, and
- (iv) Maintaining physical distance from other people and avoiding crowds.

In addition, in health-care settings including in endoscopy suites, wearing of surgical masks by HCWs may help prevent exposure to infectious material from an infected patient source (such as splashes, saliva, or mucus). Though this practice is very useful, and it may not be sufficient enough to provide complete protection from exposure to the virus and other contaminants to the wearer.

With an increasing number of COVID-19 cases in India (> 1000 cases, including 27 deaths, on March 30th, 2020), it is felt that GI health professionals need to be aware about the disease and on how to prevent COVID-19 transmission and to manage patients during the ongoing COVID-19 pandemic.

Keeping this in view, the three Indian professional bodies in the field of GI disease, namely the Society of Gastrointestinal Endoscopy of India (SGEI), Indian Society of Gastroenterology (ISG), and Indian National Association for the Study of the Liver (INASL) have come up with this guidance for gastroenterologists and GI endoscopists who are involved in providing care to patients with gastrointestinal and liver disease.

Because the available scientific evidence on the disease is scanty, these recommendations are mostly based on expert opinion and knowledge derived from other pathogens with similar characteristics. However, the guidance represents what is believed on the best current understanding and prudent clinical practice and should generally serve the gastroenterology community well.

These recommendations are divided into two sections, namely (I) those related to endoscopic procedures, and (II) other important aspects of patient care in the face of COVID-19 pandemic.

RECOMMENDATIONS RELATED TO ENDOSCOPIC PROCEDURES

Scheduling of Endoscopic Procedures

Endoscopy procedures can be divided into three categories, based on their urgency as follows:

Emergency Endoscopic Procedure

Procedures for patients with life-threatening conditions, e.g. diagnostic or therapeutic endoscopic procedures in patients with acute upper GI or lower GI bleeding, removal of

impacted foreign body, therapeutic endoscopy in patients with cholangitis or GI perforations.

Urgent Endoscopic Procedures

Diseases/conditions in which the treating clinician feels that an endoscopic procedure will have a significant beneficial impact on clinical outcome over the next one month. Examples include drainage of an infected pancreatic fluid collection, diagnosis and staging of GI cancers, placement of a nasojejunal or percutaneous gastrostomy tube for nutritional support, drainage of malignant biliary obstruction, or placement of a stent for malignant luminal obstruction of the esophagus, colon or duodenum.

Routine Endoscopic Procedures

Endoscopic procedures that do not fall in either of the above two categories, e.g. all routine referrals for diagnostic endoscopy procedures, and endoscopic procedures for screening or surveillance.

It is recommended that only emergency and urgent endoscopy procedures may be undertaken for the next 4 weeks or until the current threat of COVID-19 lasts or further evidence becomes available. Routine endoscopy procedures can usually be safely postponed for one month, though such patients must be closely monitored for any change in clinical status which may make change the need for endoscopy to 'urgent' or 'emergency'.⁶⁻⁹ In such cases, alternative approaches (e.g. a radiologic investigation or procedure) for diagnosis or treatment may also be explored, since these may provide a less-risky option.

All the three Indian Gastroenterology Societies (SGEI, ISG & INASL) jointly recommend to consider only emergency and urgent endoscopy procedures for the next one month or till the current threat owing to COVID-19 is over. Routine endoscopic procedures can be postponed for the next four weeks, unless a change in a patient's clinical status mandates an emergency or urgent endoscopy in the intervening period.

Endoscopic Procedures

For any patient scheduled for endoscopy, the following steps are recommended during the preprocedure, procedure, and postprocedure phases.

Preprocedure Screening

In each patient scheduled for an endoscopic procedure, history of fever or respiratory symptoms, contact with a confirmed case of COVID-19, and of recent history of travel to or of living in an area with higher rate of transmission of COVID-19 disease should be obtained. Further, for each such person, body temperature should be measured as a routine. Based on these, the person should be categorized into one of the following three categories of risk of harboring SARS-CoV-2 infection.¹⁰

Low risk:

- No symptom suggestive of COVID-19 (cough, fever, breathlessness, or diarrhea);
- No history of travel to or stay in a high-risk area* in the past 14 days; and
- No contact with a COVID-19 patient.

(*a 'high-risk area' implies an area where more than 1000 cases have been confirmed till date; this is changing over time)

Intermediate risk:

- Symptoms present, but no history of travel to or stay in a high-risk area during the past 14 days or of contact with a COVID-19 patient or
- No symptom, but history of contact with a confirmed COVID-19 patient or stay in or travel to a high-risk area in the last 14 days.

High risk:

- At least one symptom present and
- Either contact with a confirmed COVID-19 patient or of stay in a high-risk area

In case of possibility of intermediate or high risk of exposure to coronavirus, the need and urgency of the procedure must be reconsidered. In such cases, the procedure should generally be postponed unless there is an indication for emergency endoscopy. Furthermore, for persons with high-risk exposure or presence of symptoms, follow the protocol recommended by Ministry of Health and Family Welfare (MoHFW), Government of India.⁵

In the Procedure Room

- The number of staff members present in the endoscopy area during the procedure should be reduced to the minimum required.
- All members of the endoscopy team should wear appropriate personal protective equipment (PPE), such as gloves, mask, eye shield/goggles, face shields, and gown, as appropriate, based on risk assessment and stratification and undertake adequate hand washing, before and after handling the patients.
- For high-risk cases, ensure that appropriate PPE is available and worn by all members of the endoscopy team. In such cases, the sequence of wearing (donning) and removal (doffing) of PPE must follow the prescribed standard protocol.⁷⁻¹⁰
- Data on efficacy of the commonly used chemical disinfection agents against SARS-CoV-2 are currently not available. However, because most of the other coronaviruses are inactivated by the commonly used disinfectants, it appears that no additional steps beyond those currently recommended for endoscope cleaning and re-

processing are needed.^{7,10} However, the recommended protocols for disinfection techniques for endoscope reprocessing must be strictly adhered to.

- As far as possible, only disposable endoscopic accessories should be used.
- Standard endoscopy room disinfection policy should be followed for non-COVID-19 or low-risk patients undergoing endoscopy.
- For patients with intermediate or high risk of COVID-19 infection, noncritical environmental surfaces frequently touched by hand (e.g. bedside tables, bed rails, cell phones, computers) and endoscopy furniture and floor should be disinfected at the end of each procedure.^{9,10}
- With a COVID-19 positive or very high-risk case with respiratory symptoms, the endoscopy may be performed in a negative-pressure room, if available.^{9,10}

Postprocedure Observation

- During patient observation in the postprocedure area or a recovery room, adequate spacing between beds (at least 6 feet) should be ensured.
- Surgical masks should be provided for patients with respiratory symptoms.

OTHER RECOMMENDATIONS RELEVANT TO GASTROENTEROLOGY PRACTICE***Outpatient Clinics***

- Nonurgent consultations and outpatient visits may be postponed or rescheduled for 4 weeks later (unless change in symptoms or clinical situation warrants an earlier visit during the intervening period).
- The policy of having only one accompanying person per patient should be insisted on in consultation room, waiting area and for inpatients, to prevent crowding.
- Information about COVID-19 must be displayed in the outpatient and other patient waiting areas with visuals recommending the do's and the don'ts.
- An appointment system should be instituted and followed so that the patients do not have to wait for a long time or to crowd in the outpatient or endoscopy waiting area.
- The electronic means of communications or telemedicine (such as phone calls, text messaging, WhatsApp or other video calling applications) can be used for resolving minor queries, and may help obviate a visit to the hospital or clinic, thereby reducing the risk of transmission of infection.

Academic Activities and Work Schedule of the Department

- It is ideal to follow the institutional policy regarding holding academic activities and the work schedule of the department.

- Rescheduling of department meetings or academic sessions involving more than 10 persons till the COVID-19 crisis is over should be considered.
- Fellow students and doctors should consider the use of text-messaging tools (e.g. WhatsApp) or social media tools for communication and academic interaction between members of the gastroenterology team, as well as with other specialists. While sharing information about patients over such tools, the issues related to patient confidentiality must receive due attention.
- In the event of an outbreak in the department/hospital, it is most appropriate to follow the institutional guidance. It seems appropriate for each unit/department to have more than one team of doctors and other staff working on rotation basis, to ensure that it is able to provide uninterrupted service. A schedule may be drawn, whereby one group attends the hospital for a specified number of days and the other group follows the next days. This may help avoid the risk of whole department needing quarantine in case of a high-risk exposure to a patient or another health-care worker in the hospital, resulting in the entire department closing down.

Actions in Case of Exposure to a HCW to COVID-19

- If a HCW is exposed to a person at high-risk of or to a confirmed COVID-19 case, the hospital's infection control team should be informed immediately, and the guidelines set up by the MOHFW, Government of India should be followed. Such workers may need quarantine for 14 days with self-monitoring and/or supervised guidance, based on the risk stratification of the exposure.^{5,11}
- For asymptomatic health-care workers involved in the care of suspected or confirmed cases of COVID-19 may be considered for prophylactic treatment with hydroxychloroquine as per the guidelines put forward by the Indian Council of Medical Research. The recommended dosage for this purpose is 400 mg (taken with meals) twice a day on day 1, followed by 400 mg once weekly for next 7 weeks.¹²
 - However, it is pertinent to point out that data to support this recommendation are limited to a French study in treatment (and not prophylaxis) setting, which had a nonrandomized, unblinded design with small sample size (treated cohort 26, untreated 16; derived from different hospitals and hence not necessarily comparable), and different dropout rates (6/26 and 0/16, respectively) in the two cohorts. Of the 20 patients who received hydroxychloroquine, 7 also took azithromycin. Further, it compared a surrogate outcome (absence of viral RNA on day 6), and it was unclear whether this was decided on a priori (before the study started).¹³
- In addition, the use of chemoprophylaxis carries the risk of adverse events and of instilling a false sense of security with reduced adherence to safety precautions.
- The recommendations for quarantine may change over time, if the community spread of coronavirus becomes common.

Patients With Pre-existing Digestive Diseases

- Patients on specific immunosuppressive treatment, such as corticosteroids or cancer chemotherapy (e.g. in patients with inflammatory bowel disease, autoimmune liver disease, transplant recipients) should contact their treating doctors for advice about the need to continue their treatment and for updated information.
- All such patients should follow the guidelines of the MoHFW, Government of India, for general public, which are meant to minimize exposure to the COVID-19, especially social distancing and frequent hand washing.⁵
- In patients with inflammatory bowel disease, there is no recommendation to pause the immunosuppressive treatment at the moment. Often, the risk of flare of the original disease may outweigh the chance of contracting COVID-19, necessitating the continuation of such drugs.¹⁴⁻¹⁶
- Patient with cirrhosis (even Child A) and those with prior liver transplantation should be discouraged from visiting a clinic or hospital, unless absolutely essential.
- Patients with decompensated cirrhosis should be considered for inpatient treatment only if there is a pressing indication for admission e.g. acute GI bleed, hepatic encephalopathy, tense ascites causing respiratory distress, liver cancer requiring locoregional therapy, or liver transplantation.
- Endoscopic variceal ligation as primary prophylaxis should be postponed till 4–6 weeks later, or till threat of COVID-19 infection has passed and beta-blockers should be preferred till then.
- Routine liver biopsies should be postponed for at least 4–6 weeks unless it is being carried out for confirming malignancy or an illness such as autoimmune hepatitis or acute cellular rejection.
- Postliver transplant patients should continue their standard immunosuppression till further data becomes available, (For more on COVID-19 and liver transplantation in India, please see Liver Transplantation Society of India guidance).¹⁷
- Liver transplantation recipients with COVID-19 infection should be monitored for drug-drug interactions, if they are prescribed lopinavir/ritonavir antiviral therapy because ritonavir is a potent CYP 3A4 inhibitor and can increase the levels of calcineurin inhibitors. (American Society of Transplantation Guidance).¹⁸

- Each hospital or clinic should adopt measures, as locally suitable and acceptable, and as per the regional or state policies and the local risk of occurrence of COVID-19 outbreak.

As gastroenterologists, we should adopt steps to prevent the spread of this virus, to protect ourselves, our staff members and coworkers, their family members, and the population at large, while imparting quality care to our patients.

AUTHOR CONTRIBUTIONS

All the authors contributed equally to the concept, manuscript and critical review. All authors read and approved the final version of the manuscript.

CONFLICTS OF INTEREST

The authors have none to declare.

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