

BACKGROUND AND INTRODUCTION

Following the first reports of cases of acute respiratory syndrome in the Chinese Wuhan municipality at the end of December 2019, Chinese authorities have identified a novel coronavirus as the main causative agent. The outbreak has rapidly evolved affecting other parts of China and outside the country. Cases have been detected in several countries in Asia, but also in Australia, Europe, Africa, North as well as South America. On February 12th 2020, the novel coronavirus was named severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) while the disease associated with it is now referred to as COVID-19. Human-to-human transmission has been confirmed but more information is needed to evaluate the full extent of this mode of transmission. The evidence from analyses of cases to date is that COVID-19 infection causes mild disease (i.e. non-pneumonia or mild pneumonia) in about 80% of cases and most cases recover, 14% have more severe disease and 6% experience critical illness. The great majority of the most severe illnesses and deaths have occurred among the elderly and those with other chronic underlying conditions (<https://www.ecdc.europa.eu/en/current-risk-assessment-novel-coronavirus-situation>).

The aim of the current document is to provide to health care professionals some understanding and knowledge on the best care we can offer to our patients in general and particularly those under immunosuppressive/ immunomodulatory treatment in the current situation of the COVID-19 epidemic.

Due to the urgency, ECCO has suggested to gather together a group of gastroenterologists with special interest in Opportunistic Infections and infectious disease experts, in order to provide on a regular basis guidance to the physicians of the ECCO community.

This guidance shall not replace any national recommendations from health care authorities but must be understood as an additional piece of information that will be updated when necessary based on our better understanding of this novel disease. Similarly, the following guidance is not accompanied by any ECCO recommendations.

The format below is based on an interview by gastroenterologists and experts in infectious disease from various places in Europe and reviewed by the COVID-19 Taskforce.

QUESTIONS AND ANSWERS

1. FROM THE BENCHSIDE TO THE ENDOSCOPY UNIT, WHAT ARE THE LESSONS TO BE LEARNED?

Fecal-oral transmission may be part of the COVID-19 clinical picture, according to two recent publications in Gastroenterology ^{1,2}. SARS-CoV-2 RNA is shed in feces early in infection and may even persist after respiratory symptoms abate. Whether this is clinically relevant and whether this virus in the stool really is infectious, though is not known at the moment. However, a recent publication indicates that although high amounts of virus RNA could be detected in the stool no infectious virus could be isolated from stool samples (<https://www.nature.com/articles/s41586-020-2196-x>). Of interest, the same was noted for two other coronaviruses responsible for SARS and MERS, which both are also shed in stool. It is increasingly noticed that beside the hallmark symptoms such as fever, dry cough, and dyspnea, patients may present with mild gastrointestinal symptoms such as nausea, vomiting, abdominal pain, diarrhea, and occasional loss of taste. Whether testing in stool in patients with predominant gastrointestinal (GI) symptoms shows increased sensitivity compared to a nasopharyngeal smear is unknown. SARS-CoV-2 binds to the ACE2 receptor, which serves as an entry point and is most abundant in cell membranes of the lung, kidney, as

well as in enterocytes in the ileum and colon. All these findings suggest a possible fecal-oral route of transmission questioning if the virus is only spread by a cough or a sneeze. Another recent publication showed that patients with GI symptoms who were admitted to the hospital and were diagnosed with COVID-19 were more likely to have severe disease than patients who did not have GI symptoms ³.

Transmission from humans to humans occurs primarily via direct aerosol contact. Therefore, performing endoscopies is regarded as a risk procedure for infections. The risk of exposure and subsequent infection of endoscopy personnel is substantial in cases of patients with respiratory diseases that can be spread via an airborne route. Endoscopy procedures demand short physical distance from patients to the personnel and studies performed during the global SARS outbreak of 2003 showed that droplets from infected patients could reach persons located 6 feet or more from the source. Given the above-mentioned studies of fecal detection of SARS-CoV-2 we believe that both upper and lower endoscopies bear a risk of transmission. Therefore, a FFP2 or FFP3 masks, a hairnet, goggles and/or face shields, a long-sleeved resistant gown and a minimum of 2 pairs of gloves are recommended in every patients regardless of procedure and where the patient comes from ⁴. Endoscopy for high risk or known COVID-19 positive must be performed in negative-pressure rooms. In case this condition is not available, please consider to move the procedures in surgical rooms or in any other space where negative-pressure is guaranteed. Further, a simple trick is suggested for any endoscopies: when using biopsy forceps, the highest aerosol burden in the endoscopy room is produced when removing the biopsy forceps. By the simple method of applying air suction while removing the forceps, a significant transmission of infections agents during endoscopy is obtained ⁵. It is a cheap and effective method, which can also be applied in times of shortage of consumables.

2. HEALTH CARE PROFESSIONAL WITH IBD, HOW TO PROTECT?

It's not rare that IBD patients are involved in the health care system. In a Belgian study on over 1000 patients, 8% of the IBD patients were working as Health Care Professional (HCP) ⁶. HCP are bearing a heavy burden during this pandemic as up to 10% of the reported cases in China⁷ and up to 9% of all cases in Italy have been observed among healthcare workers⁸. Their exposition to the virus can be double: at-home and professional. IBD patients treated with IM/IS are considered to be at risk for severe COVID-19 disease since the beginning of the pandemic although we don't have yet strong data to confirm this affirmation. As for any other patients, it's preferable to avoid a flare during this time, so their treatment should not be modified pre-emptively.

HCP with IBD must be particularly watchful with the recommended preventive measures. At home: avoid close contact with people, wash hands often with soap and water for at least 20 seconds or with a hand sanitizer that contains at least 60% alcohol, especially after have been in a public place, or after blowing nose, coughing, or sneezing. Avoid touching eyes, nose, and mouth with unwashed hands. At work: recommendation of personal protective equipment (PPE) for vulnerable HCP do not differ from any other worker. In case of contact with a patient suspected of COVID-19 disease, PPE associate gloves, adapted mask or respirator, disposable- fluid resistant gown and eye protection. Regular hand hygiene is crucial. HCP should follow local guidelines of protection during their routine work with all patients.

In some countries, local authorities have recommended that vulnerable HCP should be re-deployed, wherever possible, to clinical areas and duties that have reduced exposure to patients with confirmed or suspected COVID-19. Clinical areas with an increased risk of exposure to COVID-19 typically include emergency departments, infectious disease units and intensive care units. Other facilities may also be identified as increased risk zones such as home care nurses, care givers in home for elderly people, etc. We believe that it is reasonable at this stage that patients on immunosuppressive/biologicals drugs and working in "high-risk" conditions are, if possible, redirected towards the lowest risk zones.

Interview realized on behalf of the COVID-19 ECCO Taskforce with



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Note

Since the infection is dynamic and knowledge and evidence are growing rapidly, some of this guidance will be regularly updated based on tailored recommendations for each region according to the best evidence.

A very important project has been set up very recently to increase our knowledge on this novel disease in our IBD patients. We strongly encourage you to participate.

The project is a global initiative from the International Organization for the study of IBD (IOIBD) to record timely proven cases of COVID-19 infection in our IBD patient. We encourage IBD clinicians worldwide to report ALL cases of COVID-19 in their IBD patients, regardless of severity (including asymptomatic patients detected through public health screening). Reporting a case to this Surveillance Epidemiology of Coronavirus) Under Research Exclusion (SECURE)-IBD registry should take approximately 5 minutes. Please report only confirmed COVID-19 cases, and report after sufficient time has passed to observe the disease course through resolution of acute illness and/or death. With the collaboration of our entire IBD community, we will rapidly be able to define the impact of COVID-19 on patients with IBD and how factors such as age, comorbidities, and IBD treatments impact COVID outcomes. This project, including a summary of all data collected to date, will be accessible following the link: <https://covidibd.web.unc.edu/>

References:

1. Gu J, Han B, Wang J. COVID 19: Gastrointestinal manifestations and potential fecal-oral transmission. *Gastroenterology* March 2020. DOI: 10.1053/j.gastro.2020.02.054
2. Xiao F, Tang m, Zheng X, Liu Y, Li X, Shan H. Evidence for gastrointestinal infection of SARS-CoV-2. *Gastroenterology* March 2020 ; DOI: 10.1053/j.gastro.2020.02.055
3. Pan L, Mu M, Yang P, Sun Y, Wang R, Yan J, Li P, Hu B, Wang J, Hu C, Jin Y, Niu X, Ping R, Du Y, Li T, Xu G, Hu Q, Tu L. Clinical characteristics of COVID-19 patients with digestive symptoms in Hubei, China: a descriptive, cross-sectional, multicenter study. *American J Gastroenterology* in press.
4. Repici A, Maselli R, Colombo M, Gabbiadini R, Spadaccini M, Anderloni A, Carrara S, Fugazza A, Di Leo M, Galtieri PA, Pellegatta G, Ferrara EC, Azzolini E, Lagioia M. Coronavirus (COVID-19) outbreak: what the department of endoscopy should know. *Gastrointest Endosc.* 2020 Mar 14:S0016-5107(20)30245-5. doi: 10.1016/j.gie.2020.03.019.
5. Vavricka SR, Tutian, R, Imhof A, Wildi S, Gubler C, Fruehauf H, Ruef C, Schopefer AM, Fried M. Air suctioning during colon biopsy forceps removal reduces bacterial air contamination in the endoscopy suite. *Endoscopy* 2010; 42: 736-741.
6. Rahier JF, Moreels T, Peeters H, D'Haens G, Franchimont D, de Vos M, Dewit O, Reenaers C, van Kemseke C, Bossuyt P, Mana F, Vermeire S, Van Gossum A, De Looze D, van de Mierop F, Delen S, Ferrante M, Van Assche G, Louis E; on behalf of Belgian IBD Research Group. Impact of immunosuppressant and anti-tnf treatment on common infections in IBD patients. *OP UEGW* 2012. *Gut* 2012; 61 (Suppl 3)
7. World Health Organization (WHO). Report of the WHO China Joint Mission on Coronavirus Disease 2019 (COVID-19) 2020 [cited 1 March 2020]. Available from: <https://www.who.int/docs/default-source/coronaviruse/who-china-joint-mission-on-covid-19-final-report.pdf>
8. Istituto Superiore di Sanita' (ISS). Sorveglianza Integrata COVID-19 in Italia 2020 [updated 26 March 2020; cited 26 March 2020]. Available from https://www.epicentro.iss.it/coronavirus/bollettino/Infografica_26marzo%20ITA.pdf