Since January 2020 Elsevier has created a COVID-19 resource centre with free information in English and Mandarin on the novel coronavirus COVID-19. The COVID-19 resource centre is hosted on Elsevier Connect, the company's public news and information website.

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Correspondence

Reorganization of the functional gastrointestinal disorders unit during the SARS-CoV-2 outbreak - Practical Recommendations

Dear Editor,

on March 11, 2020 the World Health Organization (WHO) declared Coronavirus disease 2019 (COVID-19) a pandemic.[1] Worldwide, clinicians of all specialties started to deal with severe acute respiratory syndrome Coronavirus 2 (SARS-CoV-2) and most of the efforts have been focused on the fight against this enemy. However, other diseases have not stopped to affect our patients and we confronted with the difficulties to provide the best care to patients with gastrointestinal diseases during this pandemic. Among the different areas of gastroenterology, the field of functional gastrointestinal disorders has witnessed a great reduction in human resources, infrastructures and available time slots, in order to make these resouces available for the fight COVID-19.[2] Therefore, a reorganization of the motility laboratories and activities is needed.

Functional Gastrointestinal Disorders Units with their motility laboratories tackle a wide range of disorders.[3] These are usually benign conditions, such as gastro-esophageal reflux disease and irritable bowel syndrome, which, however, affect more than 25% of the population.[4] Moreover, some motility disorders (i.e. achalasia) are associated to high morbidity and severe worsening of quality of life, preventing the postponement of their diagnosis and treatment.[4] While endoscopy with biopsies and radiology remain our most effective weapons to identify or manage these disorders, procedures such as high-resolution manometry (HRM) and reflux monitoring are the most specialized techniques able to clarify unclear clinical scenarios and improve patients' management.

Considering ambulatory evaluations, avoiding those not strictly necessary is recommended. Indeed, available data suggests that a high percentage of patients gets infected in hospitals.[5] Nowadays, the majority of first evaluations should be carried out via telemedicine, whereas phone or email consultations should be reserved to follow-up assessments. For most of these patients, such as those with GERD, functional dyspepsia and functional bowel disorders, online consultation with reassurance of their healthy status can solve most problems. Indeed, we must remember that discontinuation of elective evaluations may cause disorientation and anxiety among patients and worsen their disease perception. For patients requiring resupply of long-term medications, telematic renewal of prescriptions and home drugs delivery, these should be provided.

The outpatient clinic should remain accessible to provide services only to patients with severe dysphagia, bolus impaction and abdominal pain refractory to medical therapy. In this context, alarm signs need to be carefully considered. If an appointment is necessary, the day before the visit, health care professionals (HCPs) should call the patients to confirm it and to ask questions focused on identifying a possible COVID-19 infection. Patients should have a dedicated phone number available to inform healthcare workers of any change in their clinical status. The day of the evaluation, out of the hospital entrance HCPs should screen all patients with questions (respiratory symptoms, fever, anorexia, diarrhea, vomiting in the previous 2 weeks), body temperature and exclusion of possible contacts at risk (travel history), then they should maintain at least a 2 m distance from each other, avoiding crowding. Using of surgical masks and gloves is suggested. Furthermore, if after the visit, a diagnostic or interventional endoscopy is needed, this should be performed according to current guidelines.[6] A follow-up after the visit is recommended, with call 7 and 14 days later to check for symptom of COVID-19 infection.

Reflux monitoring (pH-metry, combined impedance pH-metry, wireless capsule pH-metry), antroduodenal manometry, electrogastrography, smartpill, colonic manometry, anorectal manometry, pelvic floor biofeedback therapy, and H2/CH4 breath testing should be postponed. Likewise, HRM and endoflip should be suspended and rescheduled. However, in case of severe dysphagia of unclear etiology, particularly if associated to weight loss or the need of exclusive parenteral nutrition, this is not always possible. Thus, considering the similarities with upper gastrointestinal endoscopy in terms of risks, the same precautions should be implemented when performing esophageal manometry or endoflip (Table 1): N95 respirator for patients non-suspected or having tested negative and N95 or equivalent respirators for high-risk or known COVID-19 positive cases, blue isolation gown, gloves, goggles or face shield. A negative pressure room should be used only in high-risk/confirmed case.[6] The HCPs (1 physician and/or 1 nurse or medical technician) should perform the test. A follow-up after the procedure is recommended, after 7 and 14 days, to check for symptom of COVID-19 infection.

A rapid and functional reorganization of all the activities of a motility laboratory is mandatory to maintain as good as possible the standards of care, to reduce risks for both patients and healthcare personnel and to leave resources available to tackle this pandemic. All non-priority face to face evaluations and invasive procedures should be discontinued. Alternative consultation modalities such as telemedicine, phone consultations and e-mail service should be provided and preferred. Also, when not available this type of services should be implemented and organised by local organizations and insurance systems. Functional testing should be performed when absolutely necessary. However, considering that the efficacy of herd immunity is uncertain, a vaccine is not yet available and another wave of infections may arrive, COVID-19 could become a long-term problem and therefore it is necessary to permanently integrate these services in our way of providing medical care.

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Table 1
Type of functional diagnostic procedure in relation to the use of protective equipment (PPE), manpower and frequency of gown down.

Procedure	Standard PPE for non-suspected/ test negative cases	Enhanced PPE for high risk/confirmed COVID-19	Health Care Professional manpower	Frequency of gown down
Esophageal Manometry	N95 respirator Blue isolation gown Gloves Goggles or face shield Standard motility lab	N95 or equivalent respirator Blue isolation gown Gloves Goggles or face shield Negative pressure room	1 physician and/or 1 specialist nurse and/or medical technician	Mask: end of each session Gown: change when contaminated Gloves: after each case
Endoflip	N95 respirator Blue isolation gown Gloves Goggles or face shield Standard motility lab	N95 or equivalent respirator Blue isolation gown Gloves Goggles or face shield Negative pressure room	1 physician and 1 specialist nurse	Mask: end of each session Gown: change when contaminated Gloves: after each case

For all the procedures the capacity of generating aerosol has to be determined.

Authors contribution

- Matteo Ghisa MD: writing of the manuscript, approving final version
- Brigida Barberio MD, data collection and analysis, approving final version
- Greta Lorenzon RN, data collection and analysis, approving final version
- Fabiana Zingone MD, design of the study, writing of the manuscript, approving final version
- Edoardo Savarino MD, PhD, design of the study, writing of the manuscript, approving final version

Declaration of Competing Interest

None

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