ESGE and ESGENA Position Statement on gastrointestinal endoscopy and the COVID-19 pandemic

Update 1 (18.03.2020)

Introduction

The outbreak of COVID-19 disease due to the SARS-CoV-2 virus has recently spread from its original cluster in Hubei province, China [1,2] throughout the world, and has been declared to be a pandemic by the World Health Organization [3]. Europe appears to be severely affected with an exponential increase of number of COVID-19 cases and deaths [4]. The clinical manifestations of COVID-19 are subtle, encompassing a broad spectrum from asymptomatic mild disease, to severe critical respiratory illness leading to respiratory failure, shock, multiorgan dysfunction and death [1,2,5–7]. Thus, high clinical suspicion and appropriate risk stratification are needed.

Health care professionals in endoscopy units are at increased risk of infection by SARS-CoV-2 from inhalation of airborne droplets, conjunctival contact, and feces and touch contamination [2,8]. Periendoscopic aerosolized infections have also been reported, potentially placing upper GI endoscopy among the high-risk aerosol-generating procedures (AGPs) [9]. In addition, live virus has been found in patient stool [8,10–12], and angiotensin-converting enzyme II (ACE2) the receptor used by the virus to enter human cells [2], is widely expressed in the intestinal tract [13]. In addition, infected health workers may transmit the infection to their patients as hospital-based epidemics have been reported.

Infection prevention and control (IPC) has been shown to be dramatically effective in assuring the safety of both health care professionals and patients. This is not limited to the use of personal protective equipment (PPE), but is based on a transparent and detailed IPC strategy, risk stratification, correct use of PPE, and selected interventions for patients at high risk of COVID-19 [14–16]. A rational approach regarding limited resources is equally important as the simultaneous outbreak in all European countries severely affects the availability of health resources [15].

The European Society of Gastrointestinal Endoscopy (www.esge.com) and the European Society of Gastroenterology and Endoscopy Nurses and Associates (www.esgena.org) are joining forces to provide guidance in order to assure the highest level of protection against COVID-19 for both patients and health care personnel.

This guidance statement will be updated online as needed.

Methods

This Position Statement issued by the European Society of Gastrointestinal Endoscopy (ESGE) Governing Board and European Society of Gastroenterology and Endoscopy Nurses and Associates (ESGENA) on March 18 2020 is intended to provide guidance on how to assure safety and efficacy in endoscopy units in COVID-19 outbreak areas.
A Pubmed/MEDLINE search was performed using 'severe acute respiratory syndrome coronavirus 2', 'COVID-19', 'endoscopy, digestive system endoscopy', 'gastrointestinal endoscopic examination, therapy' as MeSH terms. As our aim was to provide guidance rather than clinical recommendations, statements by international medical bodies such as the World Health Organization and the European and US Center for Disease Prevention and Control were prioritized. Guidance was grouped according to the three main phases of an endoscopy procedure, that is, pre-, intra- and post-procedure.

General comments

1 GI endoscopy units should strongly consider temporarily postponing elective, non-urgent endoscopy procedures, according to local human resources and local policies that may depend on the regional/national guidance regarding the pandemic.

2 All the staff of the endoscopy unit must be appropriately trained and informed on the IPC strategy for COVID-19 [15]. This should include potential sources of contamination, hygiene measures, COVID-19 risk factors, correct use of PPE, and interventions for high-risk or infected patients.

3 A triage should be applied to health professionals: staff should assess themselves according to potential risk factors and symptoms. Those at high-risk of COVID-19 should be isolated.

4 Enveloped viruses such as SARS-CoV-2 can easily be inactivated by commonly used disinfectants having virucidal activity (EN 14885). Reprocessing of flexible endoscopes and endoscopic accessories should be performed according to published guidelines [17]. Reuse of any disposable GI endoscopic device is strongly discouraged. During reprocessing, mucosal surfaces must be protected as recommended [17]. Additional precautions should be taken in the reprocessing of equipment, such as FFP2/3 masks, after endoscopy in confirmed COVID-19 cases.

5 Each GI endoscopy unit should have a detailed plan for the cleaning and disinfecting of endoscopy procedure rooms [18]. Cleaning of the endoscopy unit with virucidal agents is recommended as infection by contact is possible [18].

6 If feasible, online care should be provided online (e.g. telemedicine).

Preprocedural assessment (Figure 1)

1 Risk stratification of any patient for symptoms of COVID-19 should be done 1 day prior to endoscopy (by phone preferably) and on the day of endoscopy [19–21].

The assessment must include:

- History of fever, respiratory symptoms including cough and/or shortness of breath, or diarrhea
- Family members or close contacts with the above symptoms
- Any contact with a suspicious or confirmed case of COVID-19 and
- Any recent travel to a high-risk area (**Table 1**: *Please note that the areas designated to be at high risk are continuously changing and being updated and must be checked on a country by country basis.*)

During the interview on the day of endoscopy, a distance of at least 1 meter is recommended, as well as the use of a physical barrier, such as glass, if possible. Use of surgical masks is also recommended.

3 Relatives and caregivers should not have access to the endoscopy unit. If it is exceptionally required, they should undergo the same risk assessment as the patients.

4 For patients who are considered at high risk for COVID-19, separate pre- and post-endoscopy recovery areas should be arranged.

5. Whenever possible all patients entering the GI endoscopy unit should wear respiratory protective equipment (facial mask) and gloves.

6 Washing of hands with soap and warm water (at least 20 seconds) or use of alcohol-based hand rub, before and after all patient interactions, after contact with potentially infectious sources, and before and after gowning, should be done by all GI endoscopy unit personnel.

Intraprocedural risk management

1 Only essential endoscopy personnel should be present in endoscopy cases.

2 According to the patient's risk status, PPE should include gloves, hairnet, protective eyewear (goggles or face shield), waterproof gowns, and respiratory protective equipment. High-filter respirators (FFP2/3) should be used for high-risk or infected cases [22] (**Table 2**). Putting on and removal of PPE must be done as recommended [16]. In the case of limited availability of respirators, a prolonged use of up to 4 hours is acceptable.

3 Although different endoscopic procedures may have different levels of risk, for the sake of simplicity and safety we have decided to recommend the same personal protection measures for all procedures.

4 Whenever possible, in patients who are considered to be at high risk or who are known to be positive for the SARS-CoV-2 virus, GI endoscopy should be performed only if medically

indicated and in a negative-pressure room by an experienced staff [18]. If the only negative-pressure rooms are located outside the endoscopy unit, it must be ensured that these rooms are properly equipped for performing any GI endoscopy procedure. If these rooms are not available, endoscopy should be performed in a dedicated room with adequate ventilation. All the other measures mentioned above should have been taken and the risk of postponing endoscopy versus the risk of infection should have been considered.

5 For patients in intensive care units (ICUs), GI endoscopy should be performed bedside in the ICU

Post-procedure risk management

1 Consider contacting patients at 7 and 14 days to ask about any new diagnosis, or development of COVID-19 symptoms.

2 Contaminated waste and endoscopic devices from patients at high risk of or with suspected or confirmed COVID-19 should be disposed of using the specific local regulations related to high-risk waste

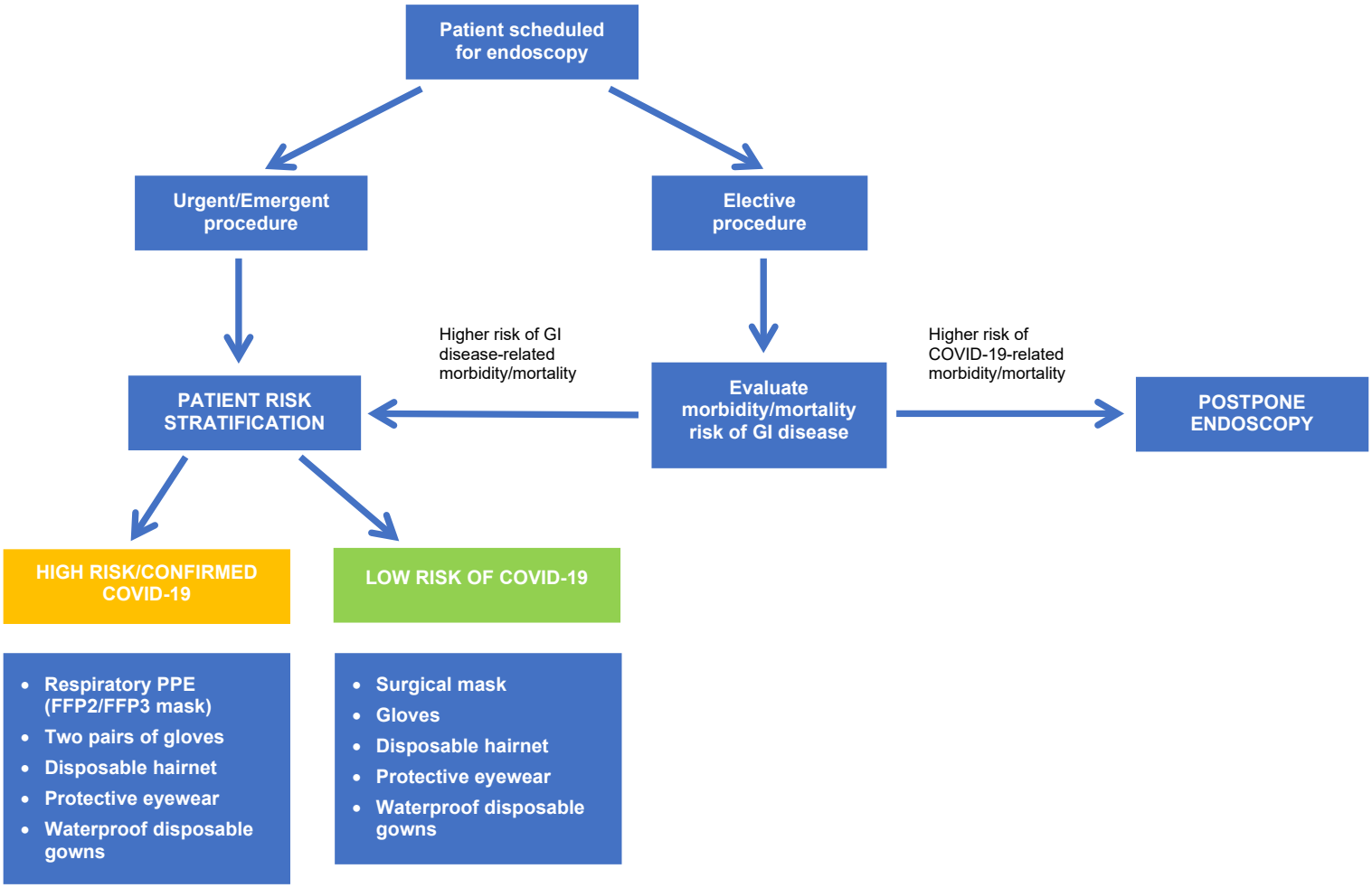
Table 1. Risk stratification for potential COVID-19 infection in patients requiring gastrointestinal endoscopy

Low-risk patient	No symptoms (e.g., cough, fever, shortness of breath, diarrhea) No history of contact with COVID-individual No travel to high-risk area during previous 14 days
High-risk patient	**Presence of symptoms with:** No history of contact with COVID-19-positive individual No travel to high-risk area during previous 14 days **No symptoms but:** Contact with COVID-19-positive individual Travel to high risk area during previous 14 days **At least one symptom + one of the following:** Contact with COVID-19-positive individual Travel to high risk area during previous 14 days

Table 2 Use of personal protective equipment stratified by patient risk

Low-risk patient	Surgical mask Gloves Disposable hairnet Protective eyewear (goggles or disposable face shield) Waterproof disposable gowns
High-risk patient; confirmed COVID-19 patient	**Respiratory PPE (FFP2/FFP3 mask)** **Two pairs** of gloves Disposable hairnet Protective eyewear (goggles or disposable face shield) Waterproof disposable gowns

Figure 1 Decision making for endoscopic procedures in COVID-19 pandemic. GI, gastrointestinal; PPE, personal protective equipment; FFP, filtering facepiece.



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