

Title:

Recommendations by the SEPD and AEG, both in general and on the operation of gastrointestinal endoscopy and gastroenterology units, concerning the current SARS-CoV-2 pandemic (March, 18)

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Recommendations by the Sociedad Española de Patología Digestiva (SEPD) and Asociación Española de Gastroenterología (AEG), both in general and on the operation of gastrointestinal endoscopy and gastroenterology units, concerning the current SARS-CoV-2 pandemic (March, 18)

- These measures are subjected to ongoing revision according to the overall situation in each hospital, their daily needs, the availability of expendable goods to satisfy the latter, and the recommendations issued by the Ministry of Health and the Health Services in each Autonomous Community.
- Each gastroenterology department will consider their implementation according to their own specific circumstances.

Infection with **SARS-CoV-2 coronavirus**, and the disease this agent may induce, are a cause of notable concern for the general population and, of course, among our professionals and patients. Gastrointestinal (GI) endoscopy is a high-risk diagnostic-therapeutic procedure in the case of upper GI examinations, and a moderate to low-risk intervention when involving lower GI explorations. The presence of SARS-CoV-2 RNA in the feces of patients infected with the virus, and occasionally in colonic biopsy samples, has been consistently documented. In fact, viral elimination in the feces may be more prolonged than viral identification in respiratory tract secretions. Furthermore, viral transmission may occur in asymptomatic individuals. However, as of this moment no information has been reported on the possibility of viral transmission, even to professionals, via this route (1).

These circumstances, and the fact that currently **“Spain is considered an area with sustained community transmission,”** justify the fact that the Asociación Española de Gastroenterología (AEG) and Sociedad Española de Patología Digestiva (SEPD) have developed the present paper (which must be considered highly changing and dynamic)

dealing with recommendations on the practice of GI endoscopy in patients with and without infection with SARS-CoV-2 in the setting of the present pandemic by this coronavirus. The **general objectives** of these recommendations include:

a) To protect our patients from the risk of infection with SARS-CoV-2, and to provide them with high-quality care.

b) To protect all healthcare professionals from the risk of infection with SARS-CoV-2.

c) To preserve the normal operation of endoscopy units, and to prevent their closing down should a team member become infected with SARS-CoV-2.

- **Remember** that SARS-CoV-2 is a coronavirus that causes an infectious condition similar to common flu. However, **digestive tract and/or hepatic involvement** is relatively common (2):

- A small proportion of patients with coronavirus present with diarrhea, nausea, vomiting, and/or abdominal discomfort even before respiratory symptom onset. These manifestations should alert professionals on the potential presence of infection with SARS-CoV-2 in those who have such symptoms, which also represent a worse prognosis factor.

- Liver involvement has been reported in patients with SARS-CoV-2 infection, more commonly in those with severe disease, but whether the cause of this hepatic condition is the virus itself, an immune-mediated event, or an adverse effect of the drugs used in the treatment of this infection remains unclear.

GENERAL MEASURES

1. At all times recommendations issued by the relevant authorities, and most particularly by the hospital's healthcare management, shall be strictly adhered to.

2. In the hospital in general, and more particularly at endoscopy units the **protective measures recommended** for the general population should be stringently implemented, including social distancing, hands hygiene, and wearing of a mask when required (see below).

3. Work areas must be kept **ventilated**.
4. **Contact between healthcare professionals should be minimized** during the present crisis. However, to avoid undesirable isolation and to maintain both an adequate level of care and the spread of news applicable to all staffers as they emerge, it is advisable that a computer-based communication channel be set up for the entire Unit.
5. **Healthcare personnel with respiratory symptoms or fever**, and/or suspected to have recently been in contact with someone with SARS-CoV-2 infection, should report this as soon as possible to the Unit's head.
6. To the extent of their possibilities, to every hospital we recommend setting up **differentiated work teams** for endoscopy, hospitalization ward, outpatient clinic, and on-duty service.
7. Ideally (whenever feasible), **work shifts** should be assigned to teams for periods of 7-15 days, preventing their coming together both in space and in time (for instance, by allotting them morning and evening schedules), in order to potentially slow down transmission speed among staff members.
8. **Healthcare activities should be reduced** to a minimum (except for patients and conditions requiring undelayable care) to allow for maximum availability when admissions or both diagnostic and therapeutic procedures are needed.

HEALTHCARE ACTIVITIES IN ENDOSCOPY

SARS-CoV-2 has shown a high capacity for transmission in health care centers. Moreover, GI endoscopy, particularly that involving the upper gut, is associated with a significant risk for transmission. We, the undersigned associations of this document, temporarily and exceptionally recommend the following:

1. **To delay ALL NON-urgent or delayable endoscopic procedures** to minimize both patient and professional exposure to SARS-CoV-2. To this end it is recommended that:
 - a) One or more physicians (never the clerical staff) reassess the indications of all scheduled endoscopy procedures, and carry out only those that are deemed

undelayable.

- b) A personal call be made to every patient to explain the reason why their procedure has been put off (not cancelled).
2. In general, **to temporarily call off** examinations with the following indications:
 - Colorectal cancer screening.
 - Endoscopic monitoring after polypectomy.
 3. **To maintain procedures** for patients where indication involves a high risk for malignancy, as well as all those procedures that are **urgently required**.
 4. **To postpone** for a period of at least 30 days all NON-urgent endoscopic examinations for **patients with fever or symptoms suggestive of respiratory infection** within 15 days before the time scheduled for the procedure.
 5. To indicate endoscopy for a **patient highly suspicious for SARS-CoV-2 infection** (pending confirmation) **or with confirmed infection** (SARS-CoV-2) only if the procedure is deemed urgent and undeferrable. Under no circumstances will an invasive procedure be performed in such patients without the express permission of the Unit's head.
 6. To maximize usual protective measures in Units. The number of professionals present in endoscopy rooms should be reduced to a minimum. It is advisable that **fixed work teams** be established including an endoscopist, a nurse, and an assistant, together with a sedation nurse and/or an anesthetist according to each given hospital. During this period residents should be excluded from endoscopy rooms.
 7. To preclude as much as possible the movements of SARS-CoV-2 patients within the hospital. Should an endoscopic procedure be indispensable, ideally and according to the resources available to each center, it should be performed within a hospital room exclusive for these patients (e.g., an operating room).

PRACTICAL RECOMMENDATIONS FOR THE ENDOSCOPY UNIT STAFF

Healthcare staff activities concerning endoscopy procedures during the present SARS-CoV-

2 pandemic should involve three stages:

1. Stratification of the risk of SARS-CoV-2 infection
2. Patient preparation
3. Personal protective measures

STRATIFICATION OF THE RISK OF SARS-CoV-2 INFECTION

The risk of infection propagation is particularly dependent on the potential risk of COVID-19 infection from the patient undergoing endoscopy, and to a lesser extent on the type of procedure.

1. Transmission risk by type of procedure:

HIGH risk	Upper endoscopy, whether diagnostic or therapeutic. Upper echoendoscopy ERCP Placement of PEG tube 
INTERMEDIATE risk	Colonoscopy Lower echoendoscopy 

2. Transmission risk by type of patient:

PATIENT PREPARATION

Patients must visit accompanied by **one single person, when possible younger than 65 YEARS of age**. It is recommended that companions do not enter the endoscopy unit, unless the patient requires specific help, and stay in the waiting room.

Before entering the endoscopy room, all patients should be asked about the presence of respiratory symptoms or fever, in order to stratify transmission risk, and tested for body temperature.

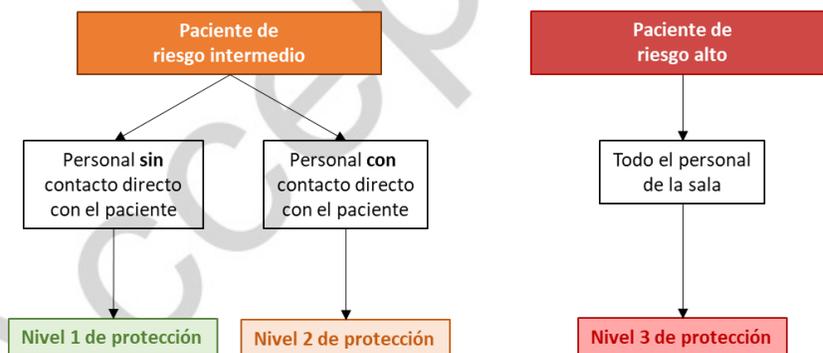
All patients must wash their hands with a hydroalcoholic solution before entering the

endoscopy room, and wear a surgical face mask and gloves.

PERSONAL PROTECTIVE MEASURES

Personal protective equipment (PPE) must be delivered to **all personnel** at the endoscopy room; PPE will vary according to risk stratification by type of patient and contact, as detailed below (3-8):

<p>Intermediate risk</p> 	<p>Any person residing in a community transmission area for SARS-CoV-2, WITHOUT respiratory symptoms and WITHOUT fever</p>	
<p>High risk</p> 	<p>Any person meeting one of the following conditions</p>	<ul style="list-style-type: none"> • Respiratory symptoms or fever with or without contact with a patient known to have infection with SARS-CoV-2 • Diagnosis with SARS-CoV-2 infection



[fig.] traducción

Intermediate risk patient

High-risk patient

Staff **without** direct contact with patient Staff with direct contact with patient All room personnel

Level 1 protection Level 2 protection Level 3 protection

Ideally, should the hospital situation allow, protective materials should be disposed of after each examination. However, given the absolute exceptionality of the present crisis, and the relative (absolute in some cases) shortage of the necessary protective materials, disposable protective items may have to be used more than once.

Staffers must take off their protective equipment and disinfect their hands before leaving the endoscopy room and entering common or rest areas.

Level 1 protection

- Surgical face mask or disposable surgical gown or surgical cap or nitrile gloves or work shoes.

Level 2 protection

- FFP2 mask, exceptionally surgical face mask or surgical gown (impermeable for high-risk examinations) or surgical cap or nitrile gloves.
- Face shield or safety goggles (reusable) or shoe covers.

Level 3 protection

- FFP3 high-grade mask or impermeable gown or hood or cap or panoramic goggles/loupes or face shield or nitrile gloves.
- Shoe covers.

PPE items must be carefully and correctly put on and taken off.

CHECKLIST

To sum up, and in order to guarantee that these recommendations are adhered to, we

recommend using a checklist:

1. Before endoscopy:

- a) Question: Within the last 14 days have you had fever (> 37.5 °C), cough, a sore throat, or respiratory issues?
- b) Temperature measurement.
- c) Wash hands with hydroalcoholic solution.
- d) Put on surgical mask and gloves.

2. Protective materials:

- a) Disposable caps.
- b) Face masks: or surgical masks or FFP2 masks or FFP3 masks.
- c) Nitrile gloves.
- d) Disposable gowns.
- e) Impermeable gowns.
- f) Face shield or goggles (9).
- g) Panoramic goggles/loupes.
- h) Shoe covers.

PROCESSING OF ENDOSCOPES/EXPENDABLE MATERIALS, AND CLEANING OF ENDOSCOPY ROOM

The recommendation by scientific societies is that endoscopes and reusable expendable materials be subjected to the **usual, standardized reprocessing and disinfection procedure**. Usual disinfectants with bactericidal, mycobactericidal, fungicidal, and virucidal properties will be used. When all current reprocessing guidelines are strictly met, the transmission risk for any type of virus is extremely low or nonexistent.

Following any endoscopic procedure, all **surfaces and materials** that have been in contact with the patient and/or his/her secretions, both in the endoscopy room and the recovery room post-sedation **must be disinfected and cleaned**, paying special attention to items such as gurney railings and pulse oximeter sensors, when a single-use unit was not

employed. Disinfection and cleaning will ensue with a disinfectant listed in the endoscopy unit's approved list. These viruses become inactive after 5 minutes in contact with disinfectants such as bleach or sodium hypochlorite solution containing 1000 ppm of active chlorine.

In view of the markedly reduced number of endoscopic procedures that should be performed at present, high-risk examinations should understandably and exclusively be performed in a dedicated endoscopy room.

Resulting residues will be eliminated and managed according to the relevant regulations in force.

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