



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.

Elsevier hereby grants permission to make all its COVID-19-related research that is available on the COVID-19 resource centre - including this research content - immediately available in PubMed Central and other publicly funded repositories, such as the WHO COVID database with rights for unrestricted research re-use and analyses in any form or by any means with acknowledgement of the original source. These permissions are granted for free by Elsevier for as long as the COVID-19 resource centre remains active.

etiología inflamatoria-infecciosa se refiere, destacan la endometriosis y la enfermedad inflamatoria pélvica en mujeres^{1,4}, la enfermedad diverticular (particularmente de intestino delgado), la enfermedad de Crohn y la tuberculosis abdominal en zonas endémicas. La radioterapia abdominal en el tratamiento de neoplasias ginecológicas, prostáticas, rectales o linfoproliferativas también puede generar adherencias, cuya severidad depende de la extensión del área tratada, el grado de fraccionamiento de la dosis y la dosis total de radiación⁴. Además, en autopsias de pacientes sin cirugía abdominal previa, se han detectado adherencias postinflamatorias hasta en el 28% de los casos². En el caso presentado se realizaron una colonoscopia y una gastroscopia para descartar enfermedad inflamatoria intestinal, así como la prueba de la tuberculina para descartar exposición previa al bacilo de la tuberculosis, siendo los resultados negativos. Todas las demás causas fueron descartadas debido al sexo del paciente, a los antecedentes personales y al examen histopatológico del intestino reseado.

Por otro lado, las bridas congénitas se forman durante el desarrollo embrionario² y son una causa extremadamente infrecuente de obstrucción intestinal en adultos⁵. Se localizan con más frecuencia entre el íleon terminal o su mesenterio y el colon ascendente, el ligamento de Treitz, el lóbulo hepático derecho o la vejiga. En la mayoría de casos se componen de tejido conectivo que contiene vasos y nervios⁵. En el caso presentado, se excluyó la etiología congénita debido a la edad del paciente, a que las bridas eran múltiples, no contenían vasos sanguíneos ni nervios, y no se situaban en las localizaciones típicas descritas anteriormente.

Descartada cualquier etiología adquirida o congénita de las adherencias, se atribuyó un origen idiopático. En conclusión, la presencia de bridas idiopáticas debería tenerse en cuenta en el diagnóstico diferencial de la obstrucción intestinal en pacientes sin cirugía abdominal previa, sobre todo en los que no se demuestra ninguna lesión responsable en las pruebas radiológicas.

Conflicto de intereses

Declaramos que no existen aspectos de financiación o de cualquier otro tipo que puedan llevar a un conflicto de intereses.

Bibliografía

- Martín-Lagos Maldonado A, Gallart Aragón T, Porcel Marin MDC. Pelvic inflammatory disease: An unusual cause of acute intestinal obstruction. *Gastroenterol Hepatol.* 2019;42:549–50, <http://dx.doi.org/10.1016/j.gastrohep.2019.01.009>.
- Brüggmann D, Tchartchian G, Wallwiener M, Münstedt K, Tinneberg HR, Hackethal A. Intra-abdominal adhesions: definition, origin, significance in surgical practice, and treatment options. *Dtsch Arztebl Int.* 2010;107:769–75, [10.3238/arztebl.2010.0769](https://doi.org/10.3238/arztebl.2010.0769).
- Elakkary EA, Dwivedi AJ, Elhorr A, Phan T. Bowel obstruction secondary to idiopathic adhesions. *Dig Dis Sci.* 2004;49:1687, <http://dx.doi.org/10.1023/b:ddas.0000043387.28977.9e>.
- Tabibian N, Swehli E, Boyd A, Umbreen A, Tabibian JH. Abdominal adhesions: A practical review of an often overlooked entity. *Ann Med Surg (Lond).* 2017;15:9–13, <http://dx.doi.org/10.1016/j.amsu.2017.01.021>.
- Galván-Montaña A, Trejo-Ávila M, García-Moreno S, Pérez González A. Congenital anomaly band, a rare cause of intestinal obstruction in children. Case report. *Cir Cir.* 2017;85:164–7, <http://dx.doi.org/10.1016/j.circir.2015.10.011>.

José Ruiz Pardo*, Andrés García Marín,
Francisco Javier Ruescas García y Juan Valiente Carrillo

*Servicio de Cirugía General y del Aparato Digestivo,
Hospital de Hellín, Hellín (Albacete), España*

* Autor para correspondencia.

Correo electrónico: josrp@hotmail.es (J. Ruiz Pardo).

<https://doi.org/10.1016/j.gastrohep.2019.12.003>
0210-5705/ © 2020 Elsevier España, S.L.U. Todos los derechos reservados.

Endoscopy activity in a covid-19 high-risk area (Barcelona): Moving forward (or backwards) according to the necessary resources available



Reinicio de la actividad endoscópica en un área de alto riesgo de covid-19 (Barcelona): progresión (o regresión) según los recursos necesarios disponibles endoscopy

Dear Editor:

Endoscopy activity has been dramatically reduced to minimum due to COVID-19 outbreak consequences. Endoscopy Units are experiencing shortages in staff, personal protective equipment (PPE), medical equipment as respiratory ventilators and monitors, beds or even physical space.

Moreover, cleaning rooms have gained a new role of PPE (i.e. goggles, or face shield) disinfection from different hospital areas. For this reason, it is convenient to be prepared on how to resume non-urgent and non-delayable endoscopy activity and adapt to the natural evolution of pandemic.

We recommend to progress to an adapted activity in a three-phase system.

For that, some minimum requirements are necessary to move forward on endoscopy activity, grouped in 3 basic needs: Workforce trained in endoscopic procedures, PPE availability and testing capacity for COVID-19 [Fig. 1]. The movement between the phases could be bidirectional depending on pandemic situation. So, the phases will be dynamic returning to a previous phase or progressing to an advanced phase.

With only one team available in the unit, it will be very risky planning to do semi-urgent endoscopy on a regular basis, considering the quarantine likelihood if health care workers get infected. On the other hand, to start assuming

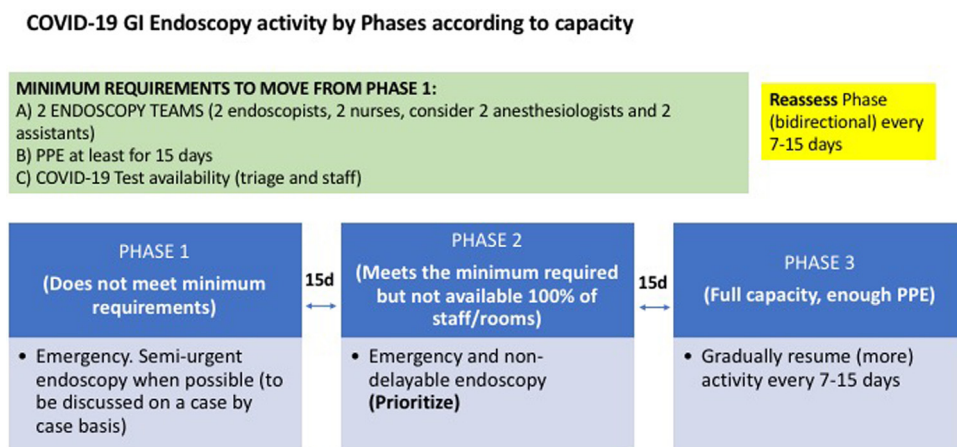


Figure 1 Dynamic phases of endoscopy activity in a high-risk area during covid-19 pandemic according to workforce, PPE availability and screening test capacity.

more schedule of procedures, it is necessary to expand the number of rooms depending on the capacity of the endoscopy unit. This may imply bringing personnel back from COVID-19 tasks.

Additionally, we are suffering shortages in PPE availability. PPEs are necessary for the COVID-19 era,¹⁻³ and they should be used for every gastrointestinal endoscopy specially in high-risk areas. As its availability for a long time may be difficult to predict, we suggest that supplies should be guaranteed for at least 2 weeks before resuming more activity.

Another concern is the screening of staff and patients. Testing capacity is not widely available right now, but it is recommended to test healthcare workers and patients. As circuits may differ on COVID-19 status, testing might be necessary to detect asymptomatic positive cases and prevent patient-to-patient, staff-to-staff, patient-to-staff and staff-to-patient transmission, taking into account the possible false positives and false negatives due to the variability of the tests.

Once those minimum requirements are met, we could move forward to a second phase, doing priority endoscopic procedures on a regular basis according to a case-by-case management and high/low priority as it has been recommended by ESGE,¹ SEED, SEPD, AEG^{4,5} and other societies. Depending on the pandemic evolution, the adaptation of endoscopy staff to second phase, and the endoscopy unit is reaching a full capacity with enough PPE, it will be possible to gradually assume more activity.

Because epidemiology and sociopolitical measures are continuously changing, we should reassess every 1 or 2 weeks (suspected incubation period⁶) our local status. And we should be prepared to move not only forward but backwards when needed.

Bibliografía

1. Gralnek I, Hassan C, Beilenhoff U, Antonelli G, Ebigo A, Pellisé M, et al. ESGE and ESGENA Position Statement on gastrointestinal endoscopy and the COVID-19 pandemic. *Endoscopy*. 2020;52.
2. Chiu PWY, Ng SC, Inoue H, Reddy DN, Hu EL, Cho JY, et al. Practice of endoscopy during COVID-19 pandemic:

position statements of the Asian Pacific Society for Digestive Endoscopy (APSDE-COVID statements). *Gut*. 2020, <http://dx.doi.org/10.1136/gutjnl-2020-321185>.

3. Repici A, Maselli R, Colombo M. Coronavirus (COVID-19) outbreak: what the department of endoscopy should know. *Gastrointest Endosc*. 2020. [https://www.giejournal.org/article/S0016-5107\(20\)30245-5/Abstract](https://www.giejournal.org/article/S0016-5107(20)30245-5/Abstract)
4. Crespo J, Andrade R, Alberca F, Balaguer F, Barreiro-de Acosta M, Bujanda L, et al. Restablecimiento de la actividad en los servicios de Digestivo. Recomendaciones de la SEPD, AEEH, GETECCU y AEG. *Gastroenterol Hepatol*. 2020, <http://dx.doi.org/10.1016/j.gastrohep.2020.04.001>. S0210-5705(20)30134-5.
5. Marín-Gabriel JC, Rodríguez de Santiago E. AEG-SEED position statement on resuming endoscopy practice after passing the peak of the COVID-19 pandemic. *Gastroenterol Hepatol*. 2020. <http://dx.doi.org/10.1016/j.gastrohep.2020.05.004>
6. Lauer SA, Grantz KH, Bi Q, Jones FK, Zheng Q, Meredith HR, et al. The incubation period of coronavirus disease 2019 (COVID-19) from publicly reported confirmed cases: estimation and application. *Ann Intern Med*. 2020, <http://dx.doi.org/10.7326/M20-0504> [Epub ahead of print 10 March 2020].

Hugo Uchima^{a,b,*}, Marco Antonio Alvarez-Gonzalez^{c,d,e}, Juan Colan-Hernandez^a, Liseth Rivero-Sánchez^f, David Barquero^g, Joan B. Gornals^h, Carme Loras^{l,j}

^a Endoscopy Unit, Gastroenterology Department, Hospital Universitari Germans Trias I Pujol de Badalona, Barcelona, Spain

^b Endoscopy Unit, Teknon Medical Center, Barcelona, Spain

^c Endoscopy Unit, Department of Digestive Diseases, Hospital Del Mar, Barcelona, Spain

^d IMIM, Hospital del Mar Medical Research Institute, Spain

^e Department of Medicine, Universitat Autònoma de Barcelona, Spain

^f Endoscopy Unit, Department of Digestive Diseases, Hospital Clinic, Barcelona, Spain

^g Endoscopy Unit, Department of Digestive Diseases, Hospital de Sant Joan Despí Moisès Broggi, Barcelona, Spain

^h Endoscopy Unit, Department of Digestive Diseases, Hospital Universitari de Bellvitge-IDIBELL, Barcelona, Spain

ⁱ Department of Gastroenterology, Hospital Universitari Mútua Terrassa, Fundació per la Recerca Mútua Terrassa, Terrassa, Catalonia, Spain

^j Centro de Investigación Biomédica en Red de Enfermedades Hepáticas y Digestivas (CIBERehd), Spain

* Corresponding author.

E-mail address: huchima.germanstrias@gencat.cat (H. Uchima).

<https://doi.org/10.1016/j.gastrohep.2020.05.008>

0210-5705/ © 2020 Elsevier España, S.L.U. All rights reserved.