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.

Journal of Visceral Surgery (2020) 157, S69—S70

Available online at
ScienceDirect
www.sciencedirect.com

Elsevier Masson France
EM|consulte
www.em-consulte.com/en

CORRESPONDENCE

Pre- and post-operative screening in limited-term elective cancer surgery patients during the COVID-19 pandemic

Dear Editor,

we read with great interest ''Strategy for the practice of digestive and oncological surgery during the Covid-19 epidemic'' by Tuech et al. [1]. Authors introduced a very comprehensive analysis on elective surgery for digestive cancer during COVID-19 pandemic [1]. In particular, they highlighted both broad and specific strategies (esophagogastric, hepato-bilio-pancreatic and colorectal surgery) for intraoperative and postoperative care of ''surgical environment'' [1].

At present, advice summarized in above manuscript can be considered as excellent trustworthy guidelines in digestive cancer surgery [1]. Furthermore, additional precautions suggested by Canis et al. seem timely and appropriate [2].

However, both groups of authors do not mention how to screen patients who cannot be deferred for elective surgery immediately prior to hospitalization and at hospital discharge, in order to identify positive asymptomatic patients and patients not yet symptomatic (pre-symptomatic), thus minimizing the risk of infection spread [3,4]. As asymptomatic COVID-19 patients are not routinely tested, both prevalence of asymptomatic infection and detection of pre-symptomatic infection are unclear [5].

In order to prevent COVID-19 transmission, many Surgical Societies recommended postponement of elective surgery until COVID-19 outbreak has abated. Being a surgical approach to be performed within a limited time range, limited-term surgery helps treat severe or rapidly progressing conditions, including advanced cancers. At present, no guidelines or recommendations for patients receiving limited-term surgery ruling out COVID-19 infection or precautions for preventing transmission of SARS-CoV-2 infection exist.

Nasopharyngeal (NP) and/or oropharyngeal (OP) swabs are often recommended in the screening or early diagnosis of infection [3]. A single NP swab has turned out as best approach, being well tolerated by the patient and safer for healthcare operator. Current information on CDC sensitivity test are scarce, but supposedly they range from 66%—80%, with a 20—33% chance for false negatives. The reverse transcription—polymerase chain reaction (RT-PCR) testing cycle threshold highlights large quantities of RNA viral in asymptomatic, pre-symptomatic, and symptomatic residents, suggesting a potential for transmission regardless of symptoms [4].

Although less sensitive than chest computed tomography (CT) scan, chest x-rays represent the first-line imaging method to detect patients with suspected COVID-19 [6]. In order to ease decontamination, mobile x-ray units are strongly recommended. In the early or mild stages of COVID-19 disease, chest x-rays may be negative [6]. Among COVID-19 patients requiring hospitalization, 69% showed an abnormal chest x-ray at the initial time of admission and 80% showed radiographic abnormalities in the course of hospitalization [6]. X-ray findings are most extensive 10—12 days from symptom onset [6]. Most patients had a negative CT in the two days following symptom onset with ground-glass opacities developing between day 0 and day 4 following symptom onset and peaking between 6—13 days [7]. Therefore, negative CT should not be used to rule out COVID-19, particularly in the early stage of disease [7]. Reported CT sensitivities and specificities for COVID-19 vary widely: they range from 60% to 98% and from 25% to 53% respectively [7].

Lastly, a RT-PCR positive stool test turns out in 36%—53% patients with confirmed COVID-19 infection [8]. If compared to respiratory samples, stool test turns out positive 2—5 days later [8]. Moreover, in 23%—82% patients it remains positive after negativity of respiratory samples, during a mean of up 11 ± 9 days [8].

A team of experts was appointed by Reggio Emilia Local Health Authority (LHA) (Emilia-Romagna, Italy) to draw up a COVID-19 screening pathway for patients who must undergo non-deferrable elective surgery. It aims at maximizing identification of asymptomatic/pre-symptomatic positive patients at pre-hospitalization and that of patients who become positive in the course of hospitalization.

Based on the above diagnostic information, we hereby suggest to carry out following investigations:

- 5 days before admission: accurate family and personal history for SARS-Cov-2 infection (e.g. symptoms and signs, contacts with positive persons in the previous 14 days) and physical examination;
- 2 days before admission: RT-PCR test, chest x-ray and laboratory tests (complete blood count, C-reactive protein, serum procalcitonin, hepato-bilio-pancreatic and renal function parameters, lactate dehydrogenase, D-dimer, hemostasis parameters, serum ferritin);
- 12—14 days after discharge: RT-PCR test and fecal test.

Discharge tests are intended for standard hospitalization lasting less than 10 days. In case of longer hospitalizations, due to subsequent medical or surgical complications or other reasons, tests would be performed during hospitalization at the discretion or availability by the Surgery Unit or LHA.

Different virus incubation times in addition to scarcity of scientific evidence make our protocol wide open to amendments.

Sources of funding

The authors have no financial ties to disclose.

Acknowledgements

We thank Dr. Daniela Masi (AUSL-IRCCS di Reggio Emilia) for English editing.

Disclosure of interest

The authors declare that they have no competing interest.

References

[1] Tuech JJ, Gangloff A, Di Fiore F, et al. Strategy for the practice of digestive and oncological surgery during the Covid-19 epidemic. J Visc Surg 2020, http://dx.doi.org/10.1016/j.jviscsurg.2020.03.008, pii: S1878-7886(20)30070-9.

[2] Canis M, Bourdel N, Botchorishvili R. Surgery and the Covid-19 epidemic: some additional precautions. J Visc Surg 2020, http://dx.doi.org/10.1016/j.jviscsurg.2020.04.002, pii: S1878-7886(20)30070-9.

[3] Centers for disease control and prevention. Interim clinical guidance for management of patients with confirmed Coronavirus disease (COVID-19). In: https://www.cdc.gov/coronavirus/2019-ncov/hcp/clinical-guidance-management-patients.html#lab-findings. Accessed 15 April 2020.

[4] Centers for disease control and prevention. Asymptomatic and presymptomatic SARS-CoV-2 infections in residents of a long-term care skilled nursing facility — King County, Washington, March 2020. In: https://www.cdc.gov/mmwr/volumes/69/wr/pdfs/mm6913-H.pdf. Accessed 15 April 2020.

[5] Hong KH, Lee SW, Kim TS, et al. Guidelines for laboratory diagnosis of coronavirus disease 2019 (COVID-19) in Korea. Ann Lab Med 2020.

[6] Wong HYF, Lam HYS, Fong AH, et al. Frequency and distribution of chest radiographic findings in COVID-19 positive patients. Radiology 2019:201160, http://dx.doi.org/10.1148/radiol.2020201160.

[7] Simpson S, Kay FU, Abbara S, et al. Radiological Society of North America Expert Consensus Statement on Reporting Chest CT Findings Related to COVID-19, Endorsed by the Society of Thoracic Radiology, the American College of Radiology, and RSNA. Radiol Cardiothorac Imaging 2020, http://dx.doi.org/10.1148/ryct.2020200152.

[8] Tian Y, Rong L, Nian W, He Y. Review article: gastrointestinal features in COVID-19 and the possibility of faecal transmission. Aliment Pharmacol Ther 2020;51:843—51, http://dx.doi.org/10.1111/apt.15731.

M. Zizzo[a,b,*], R. Bollino[c], V. Annessi[a]

[a] *Surgical Oncology Unit, Azienda Unità Sanitaria Locale—IRCCS di Reggio Emilia, Reggio Emilia, Italy*

[b] *Clinical and Experimental Medicine PhD Program, University of Modena and Reggio Emilia, Modena, Italy*

[c] *General and Emergency Surgery Unit, Azienda Unità Sanitaria Locale—IRCCS di Reggio Emilia, Reggio Emilia, Italy*

[*] Corresponding author.

E-mail address: zizzomaurizio@gmail.com (M. Zizzo)

Available online 28 April 2020

https://doi.org/10.1016/j.jviscsurg.2020.04.015