EDITORIAL

Preventive strategies used by GI physicians during the COVID-19 pandemic

A. Hormati[1,3], M. R. Ghadir[1], F. Zamani[3], J. Khodadadi[2], M. Afifian[4] and S. Ahmadpour[1]

1) *Gastroenterology and Hepatology Diseases Research Center,* 2) *Department of Infectious Diseases, School of Medicine, Kamkar-Arabnia Hospital, Qom University of Medical Sciences, Qom,* 3) *Gastrointestinal and Liver Diseases Research Center, Iran University of Medical Sciences and* 4) *Health information Technology, Tehran University of Medical Sciences, Tehran, Iran*

Keywords: Cholangitis, COVID-19, endoscopy, protection procedures
Original Submission: 30 March 2020; **Accepted:** 1 April 2020
Article published online: 8 April 2020

Corresponding author: S. Ahmadpour, Gastroenterology and Hepatology Diseases Research Center, Qom University of Medical Sciences, Qom, Iran.
E-mail: sajjadahmadpour@yahoo.com

Since December 2019 a number of cases of coronavirus disease 2019 (COVID-19) have been reported from Wuhan, and in just 3 months, the virus spread from Wuhan to Iran [1]. The Islamic Republic of Iran, especially the city of Qom, is one of the highest-risk areas for COVID-19. It is well documented in the literature that close contact between COVID-19–infected and –uninfected people increases the mortality rate in a population [2].

Previously we reported that after the outbreak of COVID-19 in Iran, the number of patients referred to our GI clinic in Shahid Beheshti Hospital increased unusually, by 20% [3]. Because the need for suitable therapeutic or diagnostic methods for better evaluation of GI disorders is irrefutable, what control programmes are required to reduce close contact between GI physicians and the referred infected patients? This matter became urgent when five GI physicians in our clinic were infected with COVID-19, with various forms of lung involvement. The persistence of unusual GI symptoms not only increased the numbers of patients referred to our clinic but also led us to consider diagnostic or therapeutic procedures such as endoscopy, endosonography or endoscopic retrograde cholangiopancreatography to be risky procedures.

Here, we address preventive strategies that may significantly reduce close contact between patients and gastrointestinal (GI) physicians for successful control of COVID-19 infection.

GI physicians must be aware that in the COVID-19 pandemic, human-to-human transmission is the main mode of infection via close contact or through air droplets. Personal protective equipment such as surgical masks, gowns, face shields, gloves and hand disinfectants must be used by physicians when providing any medical care, especially endoscopy, that requires little physical distance between patients with COVID-19 and physicians [4]. However, because of the lengthy time requirement needed as well as the strong possibility of aspiration of oral and faecal material during endoscopy, we limited this procedure to emergency patients only. In these patients—for example those with cholangitis, cholangiosepsis or active GI bleeding—we tried to perform procedures with the patient completely sedated while preserving a minimum safe distance. In the case of some procedures, including endoscopic retrograde cholangiopancreatography, endosonography or therapeutic endoscopy for patients with GI bleeding, it may be better if patients are intubated in order to reduce gastro-esophageal reflux. In addition, appropriate waste storage and handwashing after ending procedures are the main ways to prevent virus spread.

We reminded staff members in the GI clinic of important information so that extremely safe environments could be created and so that staff members could learn how to protect themselves from this deadly virus. Further, all entrance doors to the endoscopy and colonoscopy buildings were sterilized after completing the medical care of individual patients. For infected patients, we orally informed those with unusual GI symptoms that did not require medication that it was unnecessary to visit our GI clinic again except in an emergency. To prevent long lines of people seeking care in front of the clinic, we employed more GI physicians. In addition, we called all patients ahead of time and asked them to arrive at the clinic on time.

In addition to hiring more healthcare providers, we checked their body temperatures every day to ensure a healthy

https://doi.org/10.1016/j.nmni.2020.100676

workforce. If we suspected any infection of physicians or staff members, we prevented them from working in the clinic by isolating them under negative pressure until a negative result of a SARS-CoV-2 test was obtained.

Our main aim was to do our best to prevent transmission of COVID-19 infection from infected patients to uninfected GI physicians and staff members during the performance of high-risk procedures.

Ethical approval

This article does not describe any studies with human participants performed by any of the authors.

Consent for publication

All the authors have consented for publication.

Availability of supporting data

All data are available.

Competing interest

The authors declare that they have no competing interests.

Funding

This work was supported by Shahid Beheshti Hospital, Qom University of Medical Sciences, Qom, Iran.

Authors' contributions

S Ahmadpour and A Hormati, writing and original draft preparation. M R Ghadir, designing and investigation. F Zamani, J Khodadadi and M Afifian review and editing of the manuscript.

Acknowledgments

The authors thank Professor P-E Fournier, from the Aix-Marseille University Mediterranean, University Hospital Institute for Infectious Diseases VITROME, Marseille, France, for the writing and native language editing assistance.

References

[1] Lai CC, Shih TP, Ko WC, Tang HJ, Hsueh PR. Severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2) and coronavirus disease-2019 (COVID-19): the epidemic and the challenges. Int J Antimicrob Agents 2020;55:105924.

[2] Wu Z, McGoogan JM. Characteristics of and important lessons from the coronavirus disease 2019 (COVID-19) outbreak in China: summary of a report of 72314 cases from the Chinese Center for Disease Control and Prevention. JAMA 2020.

[3] Hormati A, Shahhamzeh A, Afifian M, Khodadust F, Ahmadpour S. Can COVID-19 present unusual GI symptoms? J Microbiol Immunol Infect 2020.

[4] Repici A, Maselli R, Colombo M, Gabbiadini R, Spadaccini M, Anderloni A, et al. Coronavirus (COVID-19) outbreak: what the department of endoscopy should know. Gastrointest Endosc 2020.