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A Novel Aerosol-Exposure Protection Mask for Patients During Upper Endoscopy

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See “Preclinical Efficacy and Clinical Feasibility of a Novel Aerosol-Exposure Protection Mask for Esophagogastroduodenoscopy” by Mai Ego Makiguchi, Seiichiro Abe, Yutaka Okagawa, et al., on page 226-233. **Clin Endosc 2022;55:208-209**

It has been more than 2 years since the outbreak of the novel coronavirus disease (COVID-19) pandemic in late 2019, caused by severe acute respiratory syndrome coronavirus 2 (SARS-CoV-2). In an effort to minimize virus transmission, many endoscopic procedures were postponed in the beginning of the pandemic. However, recently, these procedures have resumed. During the pandemic, gastroenterologists worldwide have been attempting to develop and implement guidelines to prevent the spread of the virus during procedures.¹⁻³ Current evidence suggests that droplet transmission, aerosol transmission, and close contact with infected individuals are all plausible routes of SARS-CoV-2 transmission.^{4,5} In other words, the virus can remain viable and infectious in aerosol for hours and on surfaces for several days,⁶ which may lead to nosocomial super-spreader events in endoscopy rooms. Endoscopy via oral routes, such as esophagogastroduodenoscopy, small bowel enteroscopy, endoscopic ultrasound, endoscopic retrograde cholangiopancreatography, breath tests, and esophageal manometry, is an aerosol-generating procedure.^{3,5} Therefore,

there has been an emphasis on the need for using personal protective equipment by healthcare professionals, including endoscopists.^{2,7} Efforts have also been made to reduce virus transmission during endoscopy by using modified devices such as an endoscopic mouthpiece and a physical protective box.^{8,9}

Makiguchi et al.¹⁰ aimed to assess the efficacy of a novel aerosol-exposure protection (AP) mask that was only used by patients and not by healthcare professionals. The benefits of the AP mask include the fact that it is a single-use, inexpensive mask that covers a patient's face and that it is easily manufactured with several sheets of plastic and gauze. However, there were desaturation events in three patients who used the AP masks despite the absence of control. This observation could be explained by the fact that the masks cover the entire face of patients, which may cause dyspnea or desaturation, especially in patients with respiratory symptoms associated with COVID-19. As the authors already mentioned, this study was conducted at a single center and did not compare a control group. Nevertheless, this device used by SARS-CoV-2-positive patients in endoscopy rooms would reduce transmission of the virus and protect healthcare professionals against SARS-CoV-2 infection caused by aerosol exposure during endoscopic procedures.

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Conflicts of Interest

The author has no potential conflicts of interest.

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Author Contributions

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