

Novel technique using an echo probe cover prevents oral–fecal transmission of SARS-CoV-2 during urgent colonoscopies

While routine examinations are postponed during the COVID-19 pandemic, urgent therapeutic colonoscopies are mandatory for lower gastrointestinal (GI) bleeding and colorectal ileus. SARS-CoV-2 RNA has been identified in anal/rectal swabs and stools of COVID-19 patients, even after viral clearance from the upper respiratory tract [1,2]. Feces often overflow during colonoscopy, leading to viral dissemination. Thus, a high risk of infection is associated with colonoscopy, as well as upper GI endoscopy [3]. Reported contamination of endoscopists' face shields [4] indicates that endoscopy rooms become contaminated. A novel means of blocking patient-generated droplets is therefore required. We introduce a new precautionary technique using an echo probe cover to prevent oral–fecal transmission of SARS-CoV-2 during emergency colonoscopies (► Fig. 1, ► Video 1).

An echo probe cover (14×147 cm, CIV-Flex Transducer Cover; Century Medical, Inc., USA), 13×8 cm piece of cardboard with 7×5 cm hole, and a diaper (► Fig. 2 a) are applied to create a shield. First, the probe cover with a 1.2-cm hole, which provides endoscope access, is taped onto the reverse side of the cardboard through the 7×5 cm hole (► Fig. 2 b). Wearing the prepared diaper and endoscopic examination pants, the patient lies in left lateral recumbency, and the cardboard is taped over a 4-cm hole in the diaper (► Fig. 3 a). The endoscope is inserted via the open side of the probe cover. The probe cover is fixed with a clip on the proximal side of the endoscope. This method does not interfere with scope maneuvers during colonoscopy (► Fig. 3 b).

Enclosing the endoscope within the probe cover helps to block aerosols and the diaper absorbs any droplets. These materials can be disposed of without scattering the virus into the surroundings. This method can effectively prevent



► Fig. 1 Overview of the new precautionary technique using the echo probe cover.



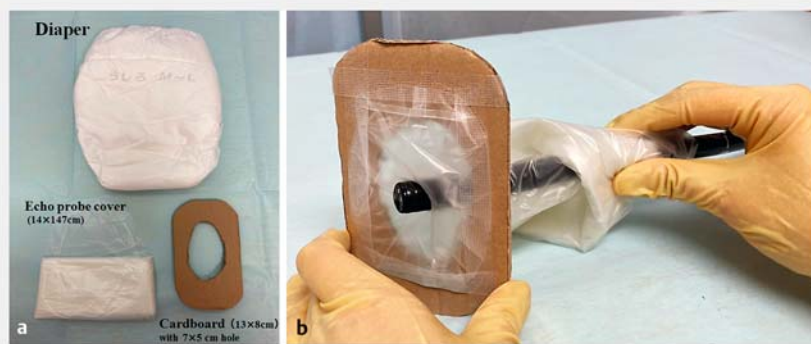
► Video 1 New precautionary technique using an echo probe cover to prevent oral–fecal transmission of SARS–CoV–2 during emergency colonoscopies.

viral transmission, as well as reducing endoscopists' mental stress by providing protection against contamination.

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Competing interests

The authors declare that they have no conflict of interest.



► **Fig. 2** Creating the shield. **a** A 14 × 147 cm echo probe cover, 13 × 8 cm piece of cardboard with 7 × 5 cm hole, and a diaper are used. **b** A probe cover with a 1.2-cm hole, which provides endoscope access, is taped onto the reverse side of the cardboard through the 7 × 5 cm hole.



► **Fig. 3** The completed shield. **a** The cardboard is taped to a prepared 4-cm hole in the diaper. **b** This method does not interfere with scope maneuvers during colonoscopy.

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