Pediatric sigmoid volvulus is a rare but emergency disease caused by abnormal twisting of the bowel along the mesenteric axis [1, 2]. Water immersion colonoscopy has been reported to be effective for sigmoid volvulus because it minimizes colonic distension and improves visibility [3, 4]. Gel-immersion endoscopy is a new method for securing the visual field during endoscopy [5]. The gel is better than water for removing contaminated bowel fluid and improving visibility. Moreover, the weight of the gel opens the twisting colon and facilitates volvulus passage. We present a case of pediatric sigmoid volvulus treated with gel-immersion endoscopic detorsion. An 8-year-old girl with a double-outlet right ventricle was admitted to our hospital because of vomiting after an injection from a gastric fistula. She had no stool or flatus passage for two days, and her facial expression was anguished. Physical examination revealed a distended tympanic abdomen with high-pitched bowel sounds. Abdominal radiography revealed a huge dilated colonic loop (Fig. 1). Computed tomography revealed bowel obstruction with swirling of the sigmoid colon, and sigmoid volvulus was suspected (Fig. 2). A twisted intestine was confirmed at the sigmoid colon, but the poor endoscopic view caused by contaminated bowel fluid made endoscopic detorsion difficult. Therefore, we performed gel immersion endoscopy using ViscoClear (Otsuka Pharmaceutical Factory, Tokushima, Japan) (Video 1). The injected gel provided a clear endoscopic view and helped assess intestinal ischemia (Fig. 3). Moreover, in the left lateral decubitus position, the weight and pressure of the injected gel opened the twisted colon and facilitated volvulus passage (Fig. 4). When the endoscope was passed through the torsion, a dilated intestinal lumen filled with gas and stool was observed, and endoscopic detorsion and decompression were successfully performed (Fig. 5).

This case study successfully employed gel-immersion endoscopy, which may be useful in the endoscopic detorsion of a sigmoid volvulus.

Endoscopy_UCTN_Code_TTT_1AQ_2AF

Competing interests

The authors declare that they have no conflict of interest.

The authors

Yasunori Yamamoto1, Yoshiou Ikeda1, Eiji Takeshita2, Toshihiro Jogamoto1, Takahiro Motoki3, Mariko Eguchi3, Yoichi Hiasa2

1 Endoscopy Center, Ehime University Hospital, Toon, Ehime, Japan
Fig. 3 The twisted colon without ischemia was shown in a clear endoscopic view by the gel immersion method.

Fig. 4 In the left lateral decubitus position, the pressure and weight of the injected gel opened the twisted colon.

Fig. 5 X-ray fluoroscopy showed that the dilated colon had disappeared.

References


Bibliography

Endoscopy
DOI 10.1055/a-1858-4826
ISSN 0013-726X
published online 2022
© 2022. The Author(s).
This is an open access article published by Thieme under the terms of the Creative Commons Attribution License, permitting unrestricted use, distribution, and reproduction so long as the original work is properly cited. (https://creativecommons.org/licenses/by/4.0/)
Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany

Endoscopy E-Videos
https://eref.thieme.de/e-videos

Endoscopy E-Videos is an open access online section, reporting on interesting cases and new techniques in gastroenterological endoscopy. All papers include a high quality video and all contributions are freely accessible online. Processing charges apply (currently EUR 375), discounts and waivers acc. to HINARI are available.

This section has its own submission website at https://mc.manuscriptcentral.com/e-videos