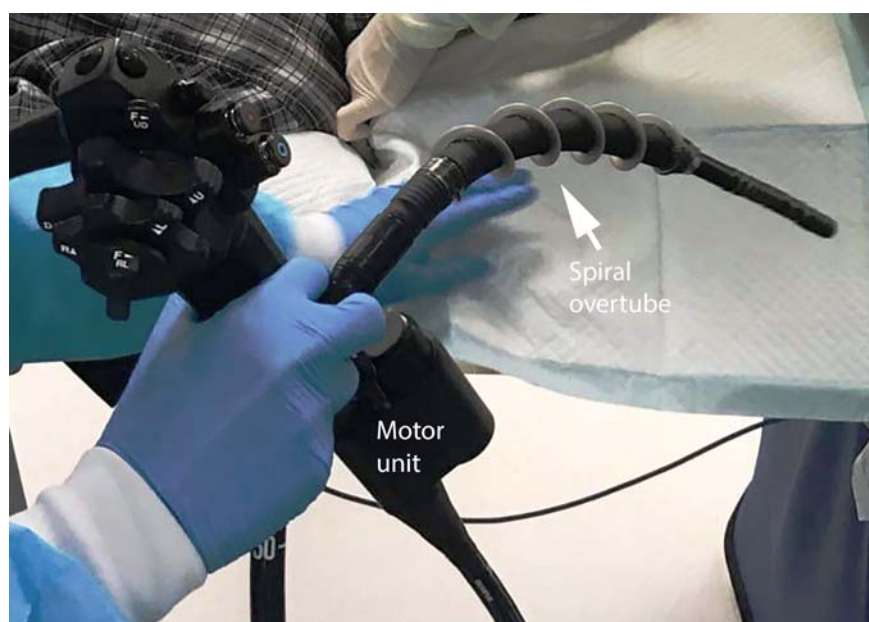
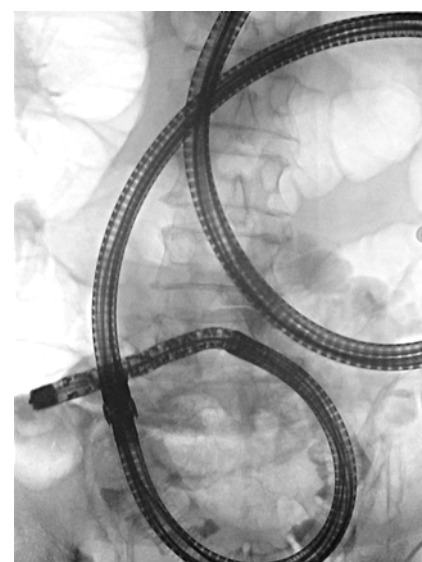


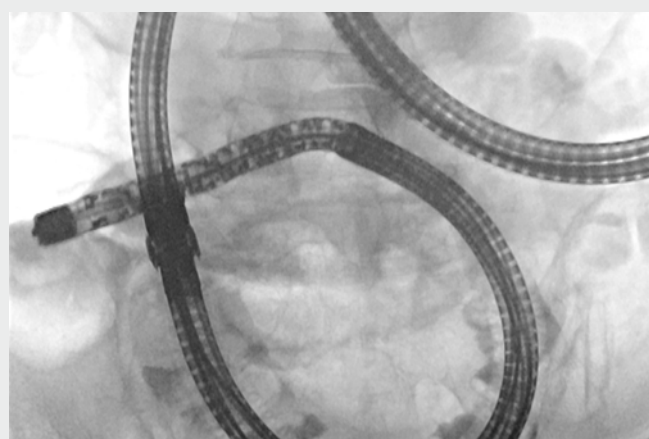
Total enteroscopy by antegrade motorized spiral enteroscopy under conscious sedation for acute overt obscure gastrointestinal bleeding



► **Fig. 1** Photograph of the motor unit and short spiral overtube on the motorized spiral enteroscope.



► **Fig. 2** Fluoroscopic view showing the configuration of the motorized spiral enteroscope with its tip in the cecum.



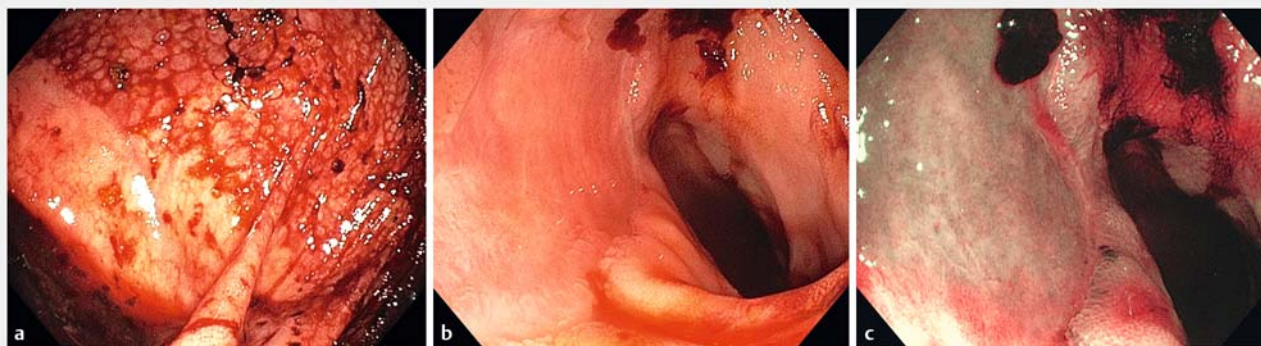
► **Video 1** Total small-bowel evaluation by antegrade motorized spiral enteroscopy in a patient under conscious sedation who had overt obscure gastrointestinal bleeding from ileal ulcers related to a recent episode of *Campylobacter* gastroenteritis.

In patients requiring deep enteroscopy, balloon overtube-assisted enteroscopy and spiral overtube-assisted enteroscopy are generally the procedures of choice,

but each has its own strengths and limitations in terms of total enteroscopy rate and procedure time [1]. Recently, a novel motorized spiral enteroscope

(MSE; Olympus, Tokyo, Japan) equipped with a short motor-driven spiral overtube has become available (► **Fig. 1**) [2–5]. To date, the reported total enteroscopies, whether by antegrade approach alone or combined antegrade and retrograde approaches, have been performed with the patient under general anesthesia or deep sedation [5]. To the best of our knowledge, we here report the first case of total enteroscopy by antegrade MSE being performed for overt obscure gastrointestinal (GI) bleeding in a patient under conscious sedation.

An 87-year-old man with recent hospitalization for *Campylobacter* gastroenteritis presented with hematochezia and a drop in hemoglobin from normal to 5.4 g/dL. After he had been resuscitated, upper GI endoscopy and colonoscopy were performed, which showed small clean-based gastric ulcers, maroon-colored blood and clots throughout the colon and terminal ileum, and several non-bleeding ulcers in the terminal ileum.



► **Fig. 3** Views during antegrade motorized spiral enteroscopy showing: **a** the cecum with maroon-colored blood present; **b** a large ulcer in the distal ileum, presumed to be related to recent episode of *Campylobacter* gastroenteritis; **c** the distal ileal ulcers viewed by narrow-band imaging.

Despite having initially been stabilized, the patient developed recurrent bleeding and shock. Urgent celiac and mesenteric angiography did not reveal any active extravasation of contrast. Because of the high clinical suspicion of small-bowel bleeding, antegrade MSE was subsequently performed with the patient under conscious sedation with midazolam and pethidine. Total enteroscopy was achieved (► **Fig. 2**) with a procedure time of 58 minutes from the ligament of Treitz to the cecum. Adherent clots and multiple non-bleeding ulcers up to 2 cm in size were visualized in the mid-to-distal ileum and were biopsied (► **Fig. 3**; ► **Video 1**). The patient tolerated MSE well and there were no adverse events. The small-bowel ulcer biopsies revealed acute inflammation without evidence of infectious organisms, malignancy, or chronicity. Given the lack of prior aspirin or NSAID use, the ulcers were presumed to be related to the patient's recent *Campylobacter* gastroenteritis. The patient was eventually discharged in stable condition, without further episodes of bleeding.

Endoscopy_UCTN_Code_TTT_1AP_2AD

Competing interests

Raymond S. Y. Tang: medical advisory board member (Boston Scientific), Philip W. Y. Chiu: consultant (Olympus, Boston Scientific), scientific advisory board member (Aptorum, EndoMASTER).

The authors

Raymond S. Y. Tang¹, Marc T. L. Wong¹, Jimmy C. T. Lai¹, Philip W. Y. Chiu^{1,2}

- 1 Institute of Digestive Disease, The Chinese University of Hong Kong, Prince of Wales Hospital, Hong Kong, China
- 2 Department of Surgery, The Chinese University of Hong Kong, Prince of Wales Hospital, Hong Kong, China

Corresponding author

Raymond S. Y. Tang, MD

Institute of Digestive Disease, The Chinese University of Hong Kong, 4M, 4/F, Day Treatment Block, Prince of Wales Hospital, Shatin, New Territories, Hong Kong, China
raymondtang@cuhk.edu.hk

References

- [1] Khashab MA, Pasha SF, Muthusamy VR et al. The role of deep enteroscopy in the management of small-bowel disorders. *Gastrointest Endosc* 2015; 82: 600–607
- [2] Neuhaus H, Beyna T, Schneider M et al. Novel motorized spiral enteroscopy: first clinical case. *VideoGIE* 2016; 1: 32–33
- [3] Beyna T, Schneider M, Arvanitakis M et al. Novel motorized spiral enteroscopy: A two-center prospective clinical trial. *Dig Endosc* 2017; 29: 7–28
- [4] Beyna T, Schneider M, Pullmann D et al. Motorized spiral colonoscopy: a first single-center feasibility trial. *Endoscopy* 2018; 50: 518–523
- [5] Beyna T, Arvanitakis M, Schneider M et al. First prospective clinical trial on total motorized spiral enteroscopy (TMSET). *Gastrointest Endosc* 2019; 89: AB48

Bibliography

DOI <https://doi.org/10.1055/a-1089-7506>
Published online: 29.1.2020
Endoscopy 2020; 52: E251–E252
© Georg Thieme Verlag KG
Stuttgart · New York
ISSN 0013-726X

ENDOSCOPY E-VIDEOS

<https://eref.thieme.de/e-videos>



Endoscopy E-Videos is a free 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.

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