Traction-assisted endoscopic full-thickness resection for a colonic submucosal tumor

Endoscopic full-thickness resection (EFTR) has been demonstrated to be feasible and safe in treating colonic submucosal tumors [1]; however, the EFTR procedure is challenging. Adequate tension and good exposure of the tumor and the deep seromuscular layer are very important for safe and effective resection during colonic EFTR. Here we introduce a novel clip-with-spring device for internal traction during colonic EFTR. The device consists of a metal clip and a spring fixed between the two claws (Fig. 1).

This can be easily inserted through the channel and used at any location. The traction direction can be adjusted intraoperatively without withdrawing the endoscope.

A 48-year-old man presented with an oval protruding lesion in the cecum (Fig. 2). Endoscopic ultrasound revealed a hypoechoic mass, measuring 16.0 × 7.9 mm, originating from the third layer (Fig. 3). During EFTR, the clip-with-spring was anchored to the lesion surface after mucosal incision. Traction was first applied in the proximal direction to facilitate the resection of the distal edge. As the procedure was progressing, resection of the proximal edge became difficult again. The ring was removed from the first site and re-anchored to a distal site (Video 1), consequently making the resection of the proximal edge easy and enabling successful en bloc resection (Fig. 4). The defect was closed by the purse-string method. The patient was discharged after 5 days, without experiencing any complications. The lesion was histologically confirmed as being a schwannoma (Fig. 5).

Several traction methods have been reported to provide assistance with endoscopic submucosal dissection for colonic superficial neoplasms [2]; however, there have been no reports of a traction strategy in EFTR for colonic submucosal tumors. To the best of our knowledge, this is the first report of internal traction for colonic EFTR, particularly with adjustable countertraction. The novel device may offer good prospects in improving the safety and efficacy of colonic EFTR.

Fig. 1 Photograph of the novel clip-with-spring device, which consists of a metal clip and a spring fixed between the two claws.

Fig. 2 Endoscopic view of the protruding lesion in the cecum.

Endoscopic ultrasound image showing a hypoechoic mass, measuring 16.0 × 7.9 mm, originating from the third layer.
Endoscopy_UCTN_Code_TTT_1AQ_2AD

Competing interests

The authors declare that they have no conflict of interest.

The authors

Jun Li1, Ming Shen2, Yunlei Wei1, Di Zhang1, Feng Liu1
1 Digestive Endoscopy Center, Shanghai Tenth People’s Hospital, Tongji University School of Medicine, Shanghai, China
2 Jiangyin Hospital of Traditional Chinese Medicine, Jiangyin Hospital Affiliated to Nanjing University of Chinese Medicine, Jiangyin, China

References


Corresponding author

Feng Liu, MD
Digestive Endoscopy Center, Shanghai Tenth People’s Hospital, Tongji University School of Medicine, 301 Mid. Yanchang Road, Shanghai, 200072, China
driluffeng@hotmail.com

Video 1 The procedure of endoscopic full-thickness resection of a cecal submucosal tumor assisted by the novel clip-with-spring device (red arrows indicate the first anchoring site).

Fig. 4 Macroscopic appearance of the completely resected specimen.

Fig. 5 Histological appearance showing spindle cells within a neurofibrillary background, consistent with a schwannoma.

Bibliography

Endoscopy
DOI 10.1055/a-1824-5167
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-NonDerivative-NonCommercial License, permitting copying and reproduction so long as the original work is given appropriate credit. Contents may not be used for commercial purposes, or adapted, remixed, transformed or built upon. (https://creativecommons.org/licenses/by-nc-nd/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

Li Jun et al. Traction-assisted endoscopic full-thickness ... Endoscopy | © 2022. The Author(s).