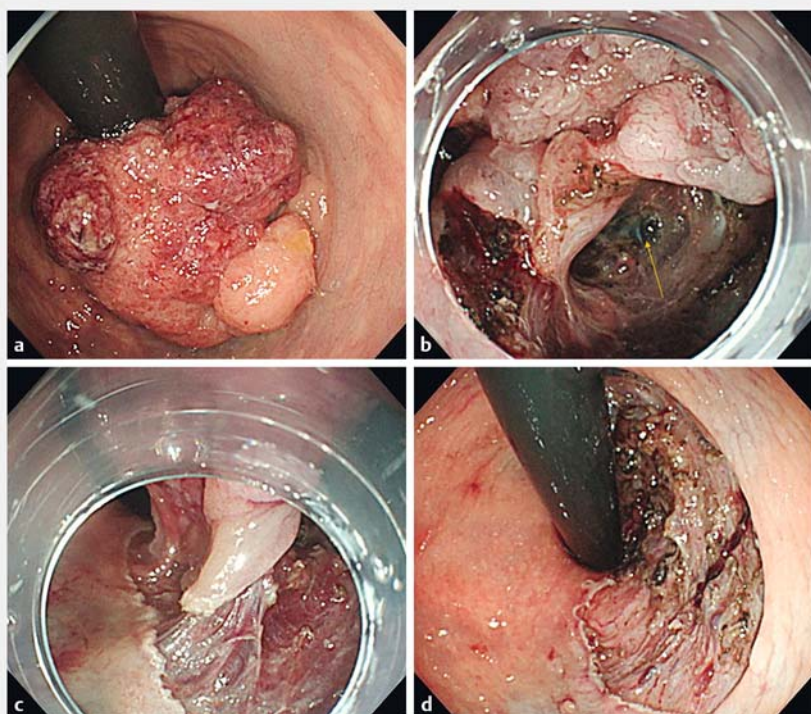
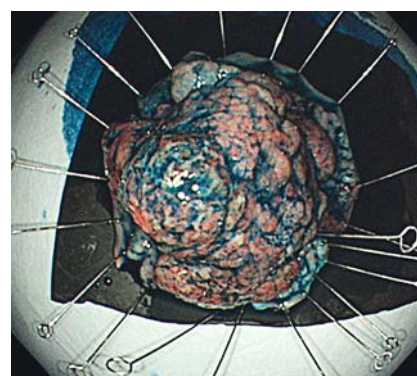


## Double-tunnel method for treatment of colorectal lesions with severe fibrosis with endoscopic submucosal dissection



► **Fig. 1** Endoscopic images showing: **a** a protruded lesion in the rectum (60 mm in size) on retroflexed view; **b** the entrance of the first tunnel at the anal site (yellow arrow); **c** the remaining side of lesion on retroflexed view; **d** the appearance after completion of submucosal dissection, which was achieved with no muscle injury.



► **Fig. 2** The opened specimen revealed submucosally invasive carcinoma, with negative margins, measuring 59 × 50 mm.

(► **Fig. 1 d**). The tumor was 59 × 50 mm in size; histological examination revealed a submucosally invasive carcinoma, with all the margins being tumor-free (► **Fig. 2**).

ESD using the double-tunnel method can achieve reliably efficient and safe resection of colorectal lesions with severe fibrosis or displaying the muscle-retracting sign.

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### Competing interests

None

### The authors

Hideyuki Chiba<sup>1</sup>, Ken Ohata<sup>2</sup>, Maiko Takita<sup>2</sup>, Jun Tachikawa<sup>1</sup>, Keiichi Ashikari<sup>1</sup>, Toru Goto<sup>1</sup>, Atsushi Nakajima<sup>3</sup>

<sup>1</sup> Department of Gastroenterology, Omori Red Cross Hospital, Tokyo, Japan

<sup>2</sup> Department of Gastroenterology, NTT Medical Center Tokyo, Tokyo, Japan

<sup>3</sup> Department of Gastroenterology and Hepatology, Yokohama City University school of Medicine, Yokohama, Japan

Endoscopic submucosal dissection (ESD) for gastrointestinal lesions enables en bloc resection with tumor-free margins and is not limited by the lesion size or location. However, en bloc removal of colorectal lesions with severe fibrosis is difficult and requires a longer time [1, 2]. We report the successful resection of an early rectal tumor by colorectal ESD with a new method: double-tunnel ESD.

A 68-year-old man was referred to our hospital for treatment of a large sub-protruded rectal lesion measuring about 60 mm in diameter (► **Fig. 1 a**). He underwent ESD, which was performed using a dual knife (KD-650U; Olympus, Tokyo, Japan), with the patient under deep sedation.

Our plan to achieve en bloc resection of this large sub-protruded lesion, a type of lesion that often has severe fibrosis or displays the muscle-retracting sign during ESD [3], was first to open two different tunnels on each side of the severe fibrosis from the anal side of the lesion (► **Fig. 1 b**). This technique allows good traction to be maintained and an appropriate dissection line to be identified, even in the presence of severe fibrosis. Subsequently, the two tunnels were connected (► **Video 1**). Finally, mucosal and submucosal dissections were performed from both sides to open the lesion from the lower side against gravity (► **Fig. 1 c**). After this, the lesion was completely resected en bloc without any complications



**Video 1** Colorectal endoscopic submucosal dissection with the double-tunnel method is used to resect a lesion with severe fibrosis efficiently and safely because good traction is maintained and an appropriate dissection line can be identified.

## Corresponding author

### Hideyuki Chiba, MD, PhD

Department of Gastroenterology, Omori Red Cross Hospital, 4-30-1, Chuo, Ota-Ku, Tokyo, 143-8527, Japan  
h.chiba04@gmail.com

## References

- [1] Matsumoto A, Tanaka S, Oba S et al. Outcome of endoscopic submucosal dissection for colorectal tumors accompanied by fibrosis. *Scand J Gastroenterol* 2010; 45: 1329–1337
- [2] Chiba H, Tachikawa J, Kurihara D et al. Safety and efficacy of simultaneous colorectal ESD for large synchronous colorectal lesions. *Endosc Int Open* 2017; 5: E595–E602
- [3] Toyonaga T, Tanaka S, Man-I M et al. Clinical significance of the muscle-retracting sign during colorectal endoscopic submucosal dissection. *Endosc Int Open* 2015; 3: E246–E251

## Bibliography

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