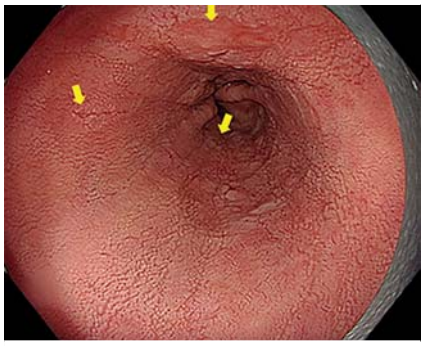
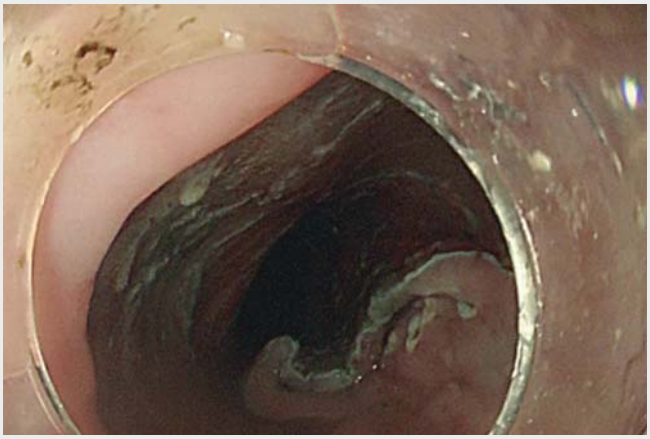
Subtotal esophageal endoscopic submucosal dissection for long-segment Barrett's esophagus and adenocarcinoma



▶ **Fig. 1** Endoscopic view showing long-segment Barrett's esophagus (C12M14), within which biopsies detected esophageal adenocarcinoma in multiple depressed areas, and also within the surrounding mucosa (yellow arrows).



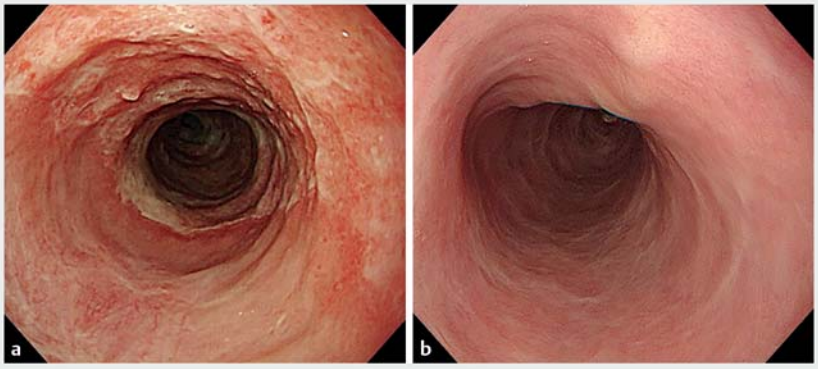
Video 1 Subtotal esophageal endoscopic submucosal dissection is performed to treat long-segment Barrett's esophagus and adenocarcinoma.

A 73-year-old man was referred to our department with a diagnosis of esophageal adenocarcinoma (EAC) in long-segment Barrett's esophagus (BE), Prague classification C12M14. The long-segment BE extended to the upper thoracic esophagus and non-detectable adenocarcinoma was confirmed in multiple areas of the long-segment BE by random biopsies (▶ **Fig. 1**). Esophageal endoscopic submucosal dissection (ESD) of the entire area of long-segment BE was therefore performed, with the patient under general anesthesia (▶ **Video 1**). The lesion was resected en bloc (▶ **Fig. 2**), in 220 minutes, with no adverse events. The total circumferential wound was 16 cm in length, and steroid injection and polyglycolic acid shielding were performed to prevent stenosis [1]. Histological assessment showed a curative resection, with adenocarcinoma invasion limited to the superficial muscularis mucosa, no lymphovascular invasion, and tumor-free margins (▶ **Fig. 3**). After the patient's discharge, local steroid injections were performed periodically. Squamous epithelium regeneration was found in the post-ESD area 6 months after ESD, with no recurrence of BE, and no evidence of stenosis (▶ **Fig. 4**).

▶ **Fig. 2** Photograph of the full circumferential resection specimen, which was wrapped around a 50-mL syringe.

▶ **Fig. 3** Macroscopic appearance of the specimen, which was 111 × 91 mm and contained a lesion of 58 × 31 mm in size (red lines).

Currently, radiofrequency ablation, cryotherapy, or hybrid argon plasma coagulation after endoscopic resection are recommended as treatment methods for BE, including where high grade dysplasia is present [2]; intraepithelial carcinoma has also been reported to be controllable by these methods. On the other hand, there is a risk of buried BE due to remnant BE after these endoscopic therapies [3]. In this case, ESD not only resulted in curative treatment of the EAC, confirmable by histologic assessment following R0 resection, but also resulted in complete en bloc resection of the BE, with no risk of remnant BE. Recent advances in endoscopic technology, resection methods, and the development of effective methods of prophylactic treatment for adverse events have enabled safe



▶ **Fig. 4** Endoscopic appearance on follow-up endoscopies showing: **a** after 1 month, regeneration of squamous epithelium; **b** after 6 months, further regeneration of squamous epithelium, without recurrence of Barrett's esophagus, and with no evidence of stenosis.

and effective extensive esophageal ESD [4, 5]. Curative treatment with just one session of ESD may become a new standard for treatment of EAC in BE.

Endoscopy_UCTN_Code_TTT_1AO_2AG

Competing interests

The authors declare that they have no conflict of interest.

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Endoscopy 2022; 54: E583–E584
DOI 10.1055/a-1704-7548
ISSN 0013-726X
published online 21.12.2021

Georg Thieme Verlag KG, Rüdigerstraße 14, 70469 Stuttgart, Germany