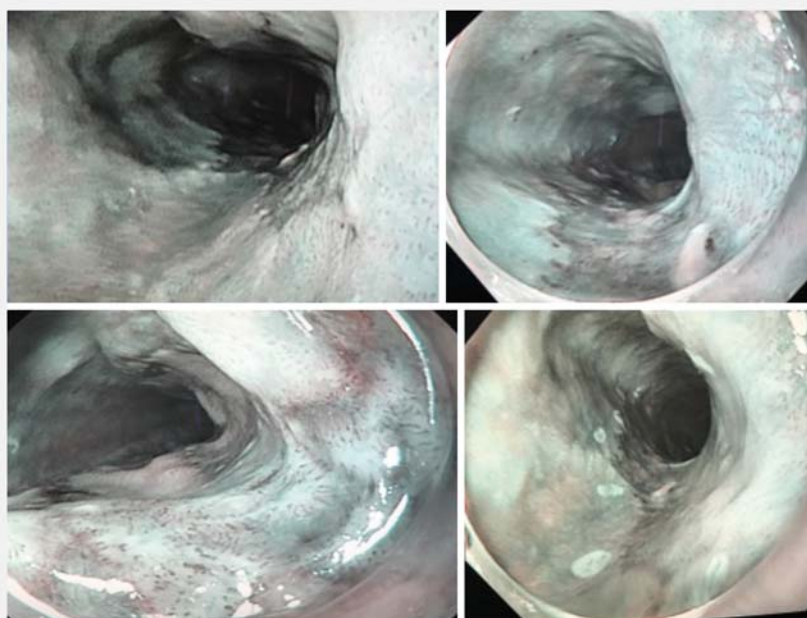


Endoscopic submucosal dissection tunneling technique for removal of a giant early esophageal squamous cancer involving 75% of the esophageal circumference

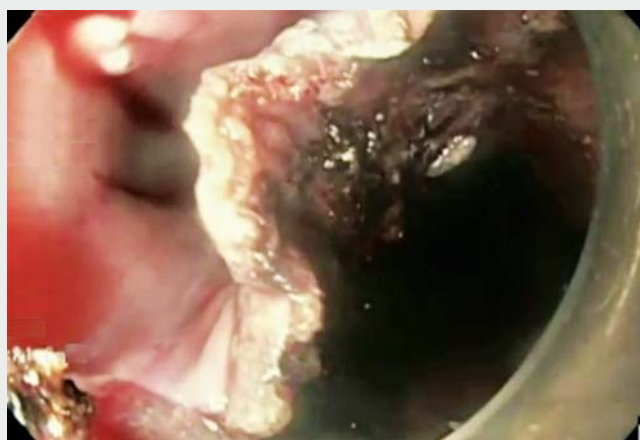
A 76-year-old man was admitted for evaluation of endoscopic resection of an extensive esophageal intramucosal squamous cell carcinoma occupying 75% of the proximal esophageal luminal circumference. Advanced endoscopic imaging techniques showed no evidence of invasion (► **Fig. 1**).

Peripheral marking of the esophageal lesion was carried out using coagulation current during narrow-band imaging (NBI). After a submucosal cushion had been created, a transverse incision of 40% of the mucosa on the oral side of the lesion was performed. A 12-cm submucosal tunnel was then created by endoscopic submucosal dissection (ESD) using hypertonic saline solution and a Flex knife endoscopic scalpel. The lateral margins were individually cut with an IT knife. Use of the IT knife 2, with an isolated tip, prevented perforation or penetration into the deeper layers. The lesion was excised in one piece, with an endoscopic R0 resection. The lesion was removed using a large foreign-body net. Only approximately 15% of the mucosa remained intact, as the rest had been affected by the tumor (► **Video 1**).

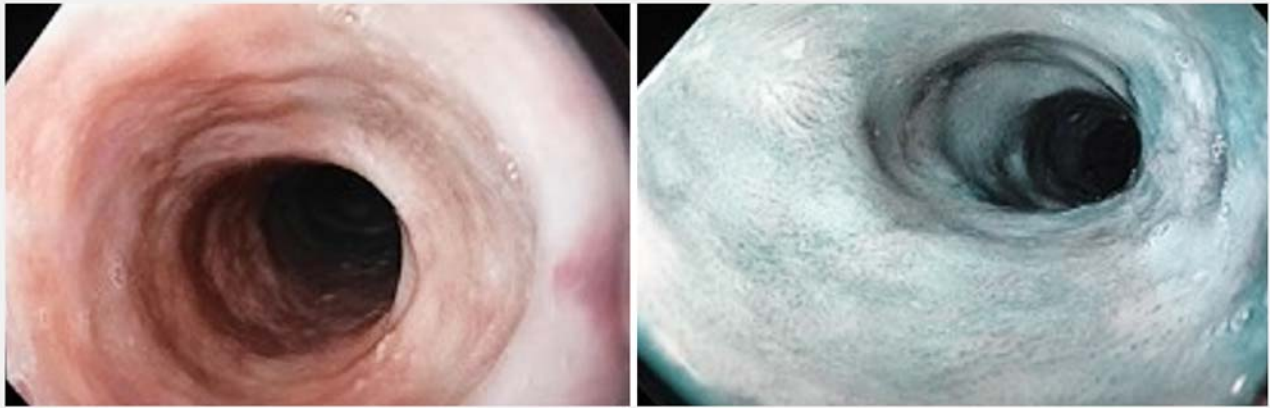
Histological examination subsequently showed a well-differentiated squamous cell carcinoma, without lymphovascular invasion and with negative margins, confirming lateral and vertical R0 resection. To prevent stenosis, the patient received high doses (80 mg twice daily) of intravenous esomeprazole for 48 hours, followed by 80 mg per day orally for the next 4 weeks. In addition, oral methylprednisolone was administered initially at a dose of 30 mg per day, then gradually reducing by 5 mg each week. In an esophagogastroduodenoscopy 3 weeks later, complete granulation was observed with a slight luminal stenosis present. This stenosis had however disappeared by the endoscopic check-up 4 months later (► **Fig. 2**).



► **Fig. 1** Narrow-band imaging of an early esophageal squamous cancer (0-1b m1-2).



► **Video 1** Endoscopic submucosal dissection tunneling technique for removal of a giant early esophageal squamous cancer involving 75% of the esophageal circumference.



► **Fig. 2** White-light and narrow-band imaging of the area at follow-up 5 months later.

In summary, this case shows that the combination of two techniques (ESD and submucosal tunneling, with two different blades) is an effective method to remove an extensive lesion. Previously, this technique had been performed for lesions that were smaller, with an average size of 5.7 cm [1]. The combination of high doses of proton pump inhibitor and reducing steroids avoided the risk of stenosis.

Endoscopy_UCTN_Code_TTT_1AP_2AD

Competing interests

None

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