



Salvage endoscopic submucosal tunneling dissection using an electrosurgical knife for an elderly patient with circumferential residual esophageal squamous cell carcinoma after radiotherapy

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A 96-year-old man underwent definitive radiotherapy for extensive early esophageal squamous cell carcinoma involving the middle esophagus. Three months after radiotherapy, residual tumor was detected during EGD.

A flat lesion 50 mm in circumference was evaluated (Fig. 1). Endoscopic submucosal dissection (ESD) was performed with the patient under general anesthesia (Video 1, available online at www.VideoGIE.org). Using a

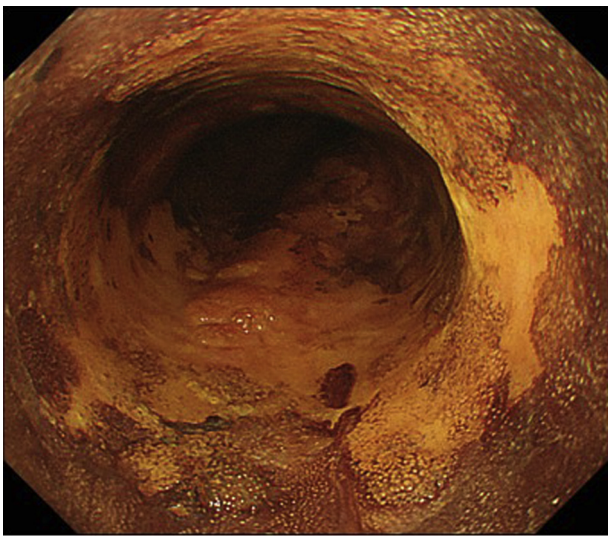


Figure 1. Chromoendoscopy with iodine staining revealed a lugol voiding area that involved the whole circumference.

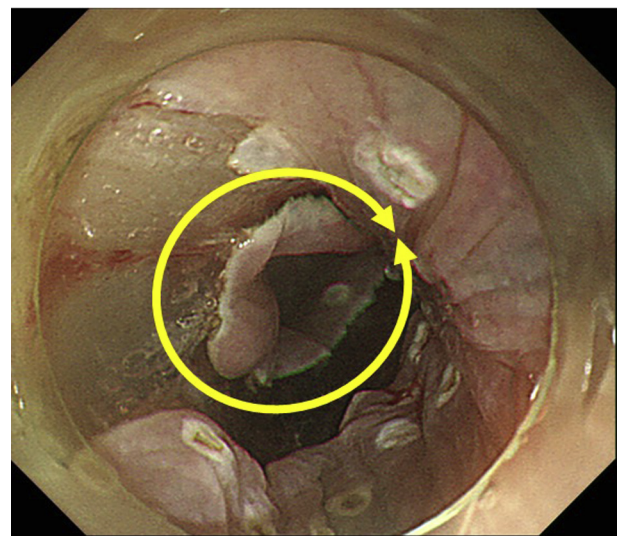


Figure 3. Circumferential mucosal incision was performed on the distal side of the lesion.

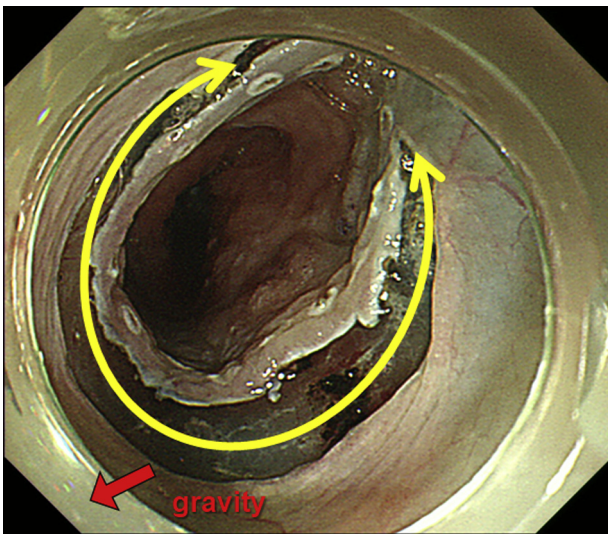


Figure 2. Endoscopic submucosal dissection started with a semicircumferential mucosal incision on the proximal side of the lesion.

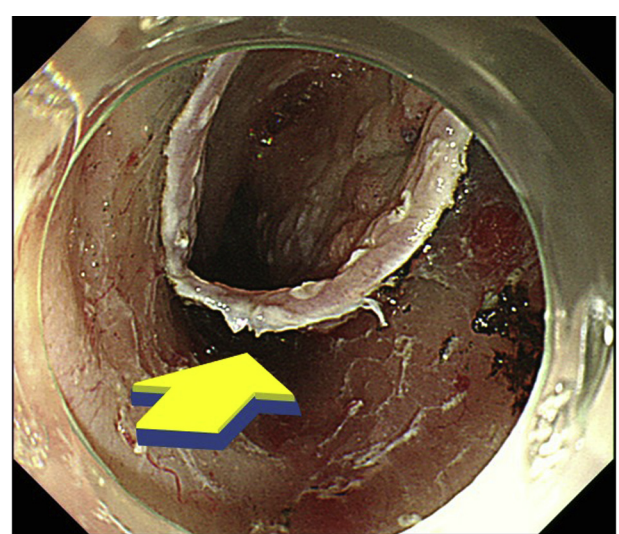


Figure 4. A submucosal tunnel was created, starting from the left lateral edge of the lesion.

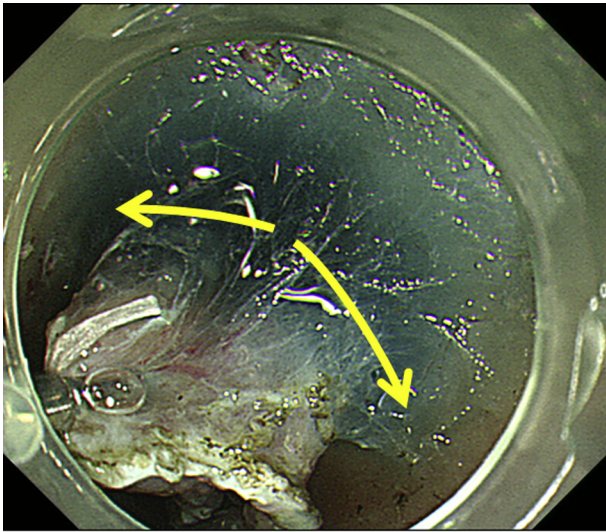


Figure 5. The clip-traction method: dental floss attached to the end of an endoscopic clip was clipped to the proximal dissected mucosal flap.

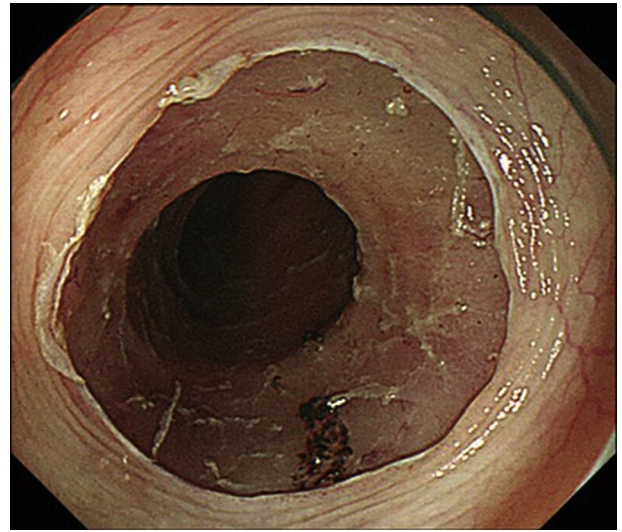


Figure 7. Circumferential submucosal dissection was completed without adverse events.

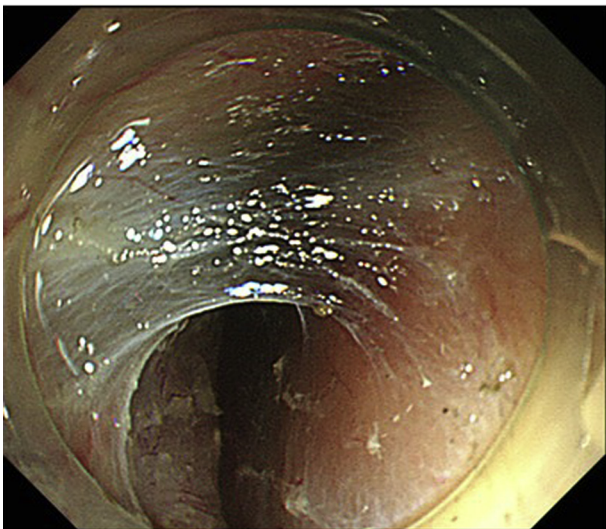


Figure 6. After using traction methods, the dissection plane could be better visualized.

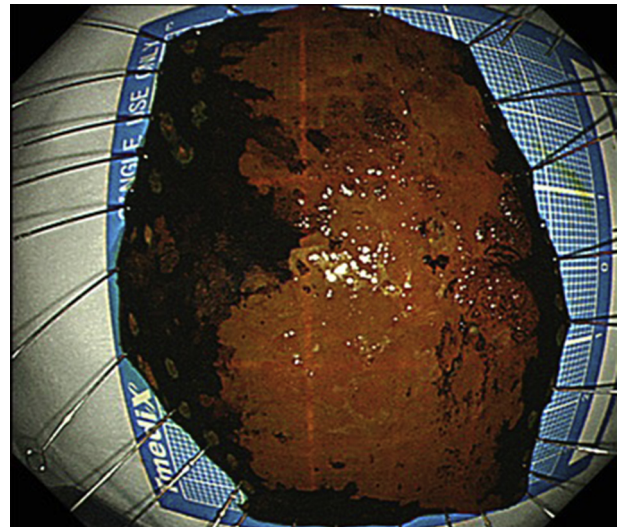


Figure 8. The resected specimen was determined to be squamous cell carcinoma, with deepest invasion extending to the lamina propria, negative margins, and dimensions of 80 × 37 mm.

Dual Knife (KD-650U; Olympus Medical, Tokyo, Japan), we first made a semicircumferential mucosal incision around the proximal tumor margin (Fig. 2). A circumferential mucosal incision was then completed at the distal end of the lesion (Fig. 3).

Changing to an ITknife nano (KD-612U; Olympus Medical), a submucosal tunnel was created starting from the left lateral edge of the lesion (Fig. 4). The small disk-shaped electrode on the backside of the insulated tip of the ITknife nano could be used to dissect the submucosa safely and efficiently.¹

With continual dissection starting proximally, the dissected proximal edge came through to the distal

margin, thus completing the tunnel. The submucosal tunnel was extended with the use of an ITknife nano to dissect from the left lateral aspect. To improve visibility of the dissection plane, we used the clip-traction method with dental floss attached to the end of an endoscopic clip¹ (Figs. 5 and 6). Submucosal fibrosis was dissected by using the Dual Knife. En bloc resection was achieved in 85 minutes, and 100 mg triamcinolone acetonide was injected into the ulcer base to prevent post-ESD stricture (Figs. 7 and 8). Histopathology results were consistent with squamous cell carcinoma measuring 80 × 37 mm and with invasion extending to the lamina propria without lymphovascular invasion.

Follow-up endoscopy revealed no esophageal stricture. No local or distant metastasis occurred during the 21 months of follow-up. Salvage ESD for circumferential esophageal cancer was effective for local treatment after radiation, as reported.² This elderly patient was able to avoid invasive esophagectomy.

DISCLOSURE

All authors disclosed no financial relationships relevant to this publication.

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