Multipoint traction technique in endoscopic submucosal dissection

Figure 1. A, A pale depressed lesion along the greater curvature of the stomach. Examination of biopsy specimen revealed poorly differentiated adenocarcinoma. B, After mucosal incision, multipoint traction method was applied as follows: the snare was grasped with the clip after pulling out the scope. The scope was reintroduced and advanced to the lesion, where the snare-bound clip was deployed on the anal side of the specimen. Additional clips were fixed on the lesion to create multipoint traction. C, By pulling the snare, the submucosal layer could be clearly visualized. D, Submucosal dissection was performed under ideal visualization, and the lesion was resected en bloc. E, A 40-mm flat erythematous lesion in the midesophagus was noted on routine endoscopy. F, The lesion remained unstained after iodine staining, thus raising suspicion for squamous cell neoplasia. G, After circumferential incision with a water jet-assisted triangle tip knife, the multipoint traction method was applied. The scope was withdrawn, and the coagulation forceps was used to grasp the snare. This was then advanced to the lesion, and the clip was deployed to anchor the oral edge of the specimen. Two clips were added for multipoint traction. H, The snare was pulled to create adequate traction. I, Submucosal dissection was carried out uneventfully, and the specimen was resected en bloc.

Endoscopic submucosal dissection (ESD) increasingly is being performed worldwide. However, ESD can be technically challenging and time consuming. Recently, the traction method has been reported to be effective at optimizing visualization of the submucosal layer. We present 2 cases of ESD in which the multipoint traction method was used (Video 1, available online at www.VideoGIE.org).

Written transcript of the video audio is available online at www.VideoGIE.org.
A 71-year-old woman underwent gastroscopy for screening during which a 10-mm pale depressed lesion along the greater curvature of the stomach was discovered (Fig. 1A). Examination of a biopsy specimen showed poorly differentiated adenocarcinoma, although no metastatic lesion was seen on a CT scan. ESD was performed by use of a single-channel therapeutic gastroscope and a water jet-assisted triangle tip knife (TTJ). After partial incision of the mucosa, a multipoint traction method was applied as follows: the snare was grasped with the clip after the scope was pulled out. The scope was reintroduced with the snare alongside the scope and advanced to the lesion, where the snare-bound clip was deployed on the specimen. Additional clips were fixed on the lesion to create multipoint traction (Fig. 1B). A repositionable clip is preferable for the first clip because the ability to open, close, and reopen allows grasping of the snare when reintubating the scope and also facilitates correct positioning before deployment. However, any clip can be used to perform this traction technique. By pulling the snare, the submucosal layer could be clearly visualized (Fig. 1C). Submucosal dissection was performed under ideal visualization, and the lesion was resected en bloc (Fig. 1D).

A similar approach was applied in the case of a 59-year-old man with a 40-mm flat lesion in the midesophagus that remained unstained after iodine staining, thus raising suspicion for squamous cell neoplasia (Figs. 1E and F). The result of histopathologic examination was diagnostic for squamous intraepithelial neoplasia; CT scan revealed no metastases. After circumferential incision with a TTJ knife, the multipoint traction method was applied. The endoscope was withdrawn, and the coagulation forceps was used to grasp the snare. Then, this was advanced to the lesion, and the nonrepositionable clip was deployed to anchor the oral edge of the specimen (Fig. 1G). The snare was pulled to create adequate traction. Two clips were added for multipoint traction (Fig. 1H). Submucosal dissection was carried out uneventfully, and the specimen was resected en bloc (Fig. 1I).

In conclusion, this technique increases accuracy, efficiency, and safety during dissection by allowing multipoint anchoring, ideal traction, optimal visualization, and, subsequently, a reduction in perforation risk and procedure time.

DISCLOSURE

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