Closure of a large mucosal defect after endoscopic submucosal dissection using “pre-detached loop and clips” method with a single-channel gastroscope

Endoscopic submucosal dissection (ESD) is commonly used for the treatment of early gastric neoplasms. However, there are reports indicating an increase in serious complications, such as perforation and delayed bleeding [1]. Various methods have been introduced to close the large mucosal defect after ESD, such as a simple closure method with metal clips or the “loop and clips” method [2]. Many authors prefer the loop and clips technique for closure of larger post-ESD mucosal defects, but this requires a two-channel endoscope and is technically more difficult. In this report, we describe a newly developed pre-detached loop technique as an easy and safe alternative method.

A 50-year-old woman underwent ESD of a gastric submucosal tumor. A gastroscope (GIF-Q260J; Olympus Medical Systems, Tokyo, Japan) with a transparent cap (D-201-10704; Olympus) attached to the tip was used. Other accessories included an electrosurgical knife (DualKnife; Olympus), metal clips (HX-600-90; Olympus), and an endoloop (MAJ-339; Olympus).

The 1.2-cm tumor was excised completely using the ESD method, as described previously [3]. For closure of the mucosal defect, an improvised version of the loop and clips technique was used. First, the loop was secured with a metal clip and inserted into the endoscope’s single working channel. The loop was positioned around the defect under direct endoscopic vision. Five metal clips were then used to anchor the endoloop around the edge of the mucosal defect. The endoloop tail was then grasped by an endoloop hook device and tightened to close the defect in a purse-string fashion (Fig. 1). The closing process took about 5 minutes and was accomplished without technical difficulty. The subsequent clinical course of the patient was uneventful.

In summary, the loop could be deployed in a freehand manner (pre-detached) to provide more flexibility while maneuvering the position of the clip and without shifting the loop (Video 1).
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References

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