Novel strategy of hold-and-drag clip closure with mantis-like claw for post-gastric endoscopic submucosal dissection defect of <30mm

Endoscopic closure of post-endoscopic submucosal dissection (ESD) defects can reduce postoperative adverse events [1]. Innovative techniques such as use of an endoloop [2], endoscopic ligation with O-ring closure [3], and reopenable clip over the line method [4] have recently been developed; however, the complexity and time-consuming nature of such procedures remain problematic. We introduce a closure strategy using a new endoclip with a mantis-like claw (MANTIS Clip; Boston Scientific, Marlborough, Massachusetts, USA) (Fig. 1) that enables a secure hold-and-drag maneuver and defect approximation in gastric post-ESD defects (Fig. 2).

A 56-year-old man presented with early gastric carcinoma in the lesser curvature of the mid-stomach. After standard ESD, a defect of 25mm in diameter remained (Fig. 3a). The defect was approximated using the MANTIS Clip by anchoring at the defect trisection points, followed by placement of standard clips between the MANTIS Clips (Fig. 2, Video 1).

First, one edge of the defect was anchored at the distal trisection point using the MANTIS Clip (Fig. 2, Fig. 3b). Second, the clip was dragged to the opposite edge of the defect. Third, when the clip was slowly reopened, the mantis-like claw maintained its anchor in the first edge without slipping, and approximated both edges of the defect (Fig. 3c). After confirming successful grasping of both sides, the clip was deployed (Fig. 3d). This procedure was repeated on the proximal side of the defect. Finally, additional standard clips (EZ Clip, HX-610–090L; Olympus, Tokyo, Japan) were deployed in the gaps between the two anchoring clips, and the whole defect was closed completely (Fig. 3e). The procedure time was 7 minutes. The defect remained closed at 5 and 30 days post-procedure (Fig. 4).

The efficacy of this technique for defects >30mm is controversial because of submucosal dead space after mucosal closure [1, 3]. However, this new anchoring clip may simplify and expedite gastric post-ESD defect closure.

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Conflict of Interest

The authors declare that they have no conflict of interest.
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