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Video Article

Novel clip closure technique for a large mucosal defect with anchor-pronged clips after duodenal endoscopic submucosal dissection

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BRIEF EXPLANATION

DUODENAL ENDOSCOPIC SUBMUCOSAL dissection (DESD) has a high incidence of delayed adverse events (AEs).[1] However, complete mucosal closure (CMC) can reduce the risk of AEs after DESD.[2] Conventional clip closure is a common technique,[1] but it poses challenges when used for CMC of large defects after DESD. This case shows a simple closure technique using anchor-pronged clips (MANTIS clip; Boston Scientific, Waltham, MA, USA) for CMC after DESD.

A 63-year-old man underwent DESD for a 40 mm flat elevated lesion in the descending duodenum (Fig. 1a). During the DESD, an intraprocedural perforation occurred, which was closed using a conventional clip (SureClip; Micro-tech, Nanjing, China). Then en bloc resection was performed on a 47 × 41 mm specimen (Fig. 1b). After resection, mucosal closure was initiated with the anchor-pronged clips for the approximately half circumferential defect (Fig. 2a,b). We grasped the oral edge of the defect using the anchor-pronged clip, allowing us to bring and grasp the opposite side (Video S1). The anchor-pronged clip closed the center of the defect (Fig. 2c), and CMC was achieved in 11 min using seven additional conventional clips (Fig. 2d). The patient was discharged 6 days later without AEs. Pathological examination revealed the lesion was an intramucosal well-differentiated adenocarcinoma with negative resection margins.

Although there are various techniques for CMC after DESD,[1] some of these methods require technical skills. Anchor-pronged clip closure is a simple technique that enables the closure of larger defects and overcomes the challenges of conventional clips during the closure procedure, such as tissue slippage when grasping the opposite side.[3,4] Furthermore, by applying the previously reported technique of anchor-pronged clip to grasp and suture the muscle layer, it may be possible to reduce suture-induced dead space even in the duodenum.[5] Therefore, mucosal

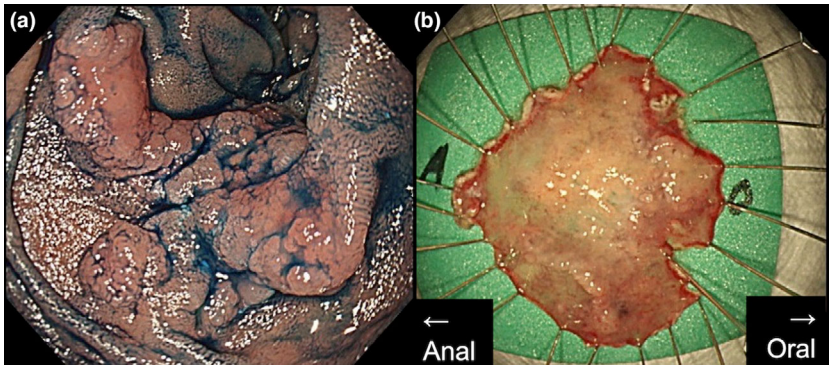

Figure 1 (a) A 40 mm flat elevated lesion on the descending portion of the duodenum. (b) A 47 × 41 mm specimen resected by endoscopic submucosal dissection.

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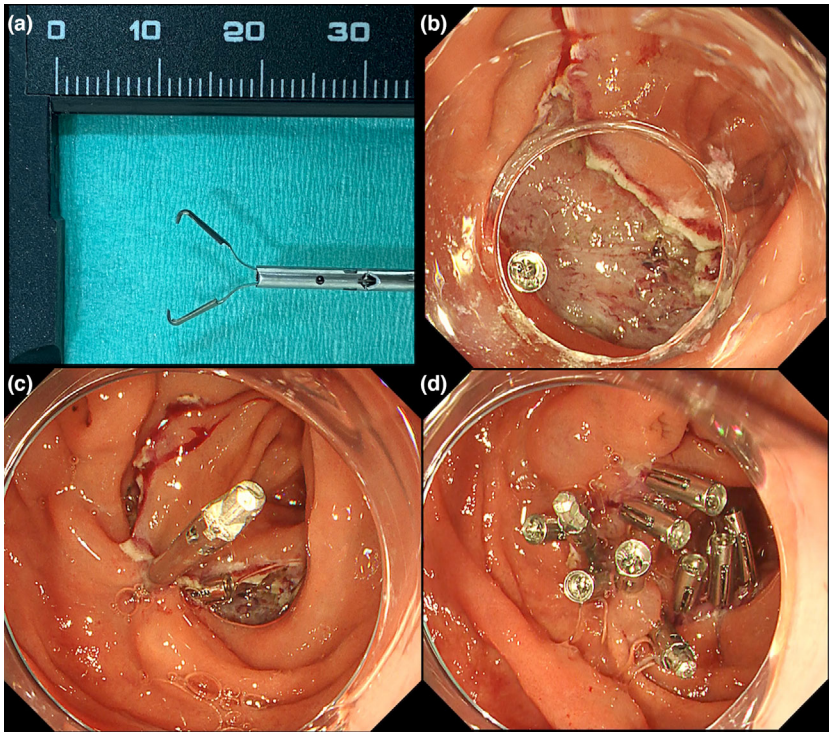

Figure 2 (a) An image of the anchor-pronged clip (MANTIS clip; Boston Scientific, Waltham, MA, USA). The tip of the clip is anchor-pronged, much like a mantis' arm. The clip opening width is 11 mm, the angle of tips is 60°, and the clip tip length is 10 mm. (b) A large half-circumferential mucosal defect after duodenal endoscopic submucosal dissection. (c) The anchor-pronged clip allows the closure of the center of mucosal defects. (d) Complete mucosal closure was achieved in 11 min using two anchor-pronged clips and seven additional clips (SureClip; Micro-tech, Nanjing, China).

closure using anchor-pronged clips is a viable option for CMC of large defects after DESD.

Authors declare no conflict of interest for this article.

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SUPPORTING INFORMATION

ADDITIONAL SUPPORTING INFORMATION may be found in the online version of this article at the publisher's web site.

Video S1 A novel clip closure technique with anchor-pronged clips after duodenal endoscopic submucosal dissection.