Colorectal endoscopic submucosal dissection using a clip-on-clip traction method

To safely and efficiently perform colorectal endoscopic submucosal dissection (ESD), clear visualization of the submucosal layer is important. Therefore, various traction methods have been developed to date [1-3]. However, there are few reports of using special devices other than clips, and traction methods that are generally used have not been reported. Recently, we developed a new clip-on-clip closure method to close the mucosal defect after ESD using clips only [4]. Here, we describe a new traction method: clipon-clip traction method (CCTM).

The colorectal ESD method using CCTM is shown in **> Video 1**. The patient had a nongranular laterally spreading tumor, 20 mm in size, in the rectosigmoid. Marking was done around the lesion and a fullcircumference incision was made. First, a clip was placed on the mucous membrane on the lesion side (>Fig.1a). Then, a second clip was placed on the handle of the first clip (> Fig. 1 b). Next, the teeth of a third clip were passed through the gap between the teeth of the second clip, which served as an anchor, and then fixed to the contralateral normal colorectal mucosa (**> Fig. 1 c**). In the current case, the third clip did not fix to the contralateral colorectal mucosa. However, there was adequate space between the teeth of the second clip for



Video 1 Colorectal endoscopic submucosal dissection and troubleshooting using the clip-on-clip traction method.

a fourth clip to be added. This ensured a strong traction.

Because the submucosa could be viewed properly using CCTM, colorectal ESD could be performed safely without any intraoperative adverse event. As the resected lesion was fixed with a clip to the contralateral side, the lesion could be removed from the mucosa with a grasping forceps.

CCTM is simple, and is a novel method that can be applied safely to achieve

effective traction even in a narrow intestinal tract, such as the rectosigmoid or sigmoid colon.

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Competing interests

None

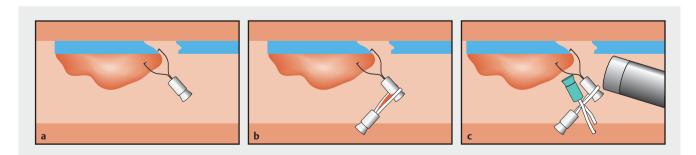


Fig. 1 Colorectal endoscopic submucosal dissection schema using the clip-on-clip traction method. **a** After full-circumference incision of the lesion, the first clip was placed on the mucous membrane on the lesion side. **b** A second clip was placed on the handle of the first clip. The gap between the teeth of the second clip (red area) was used as an anchor. **c** The teeth of a third clip (green) were passed through the gap, and then fixed to the contralateral normal mucosa.

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