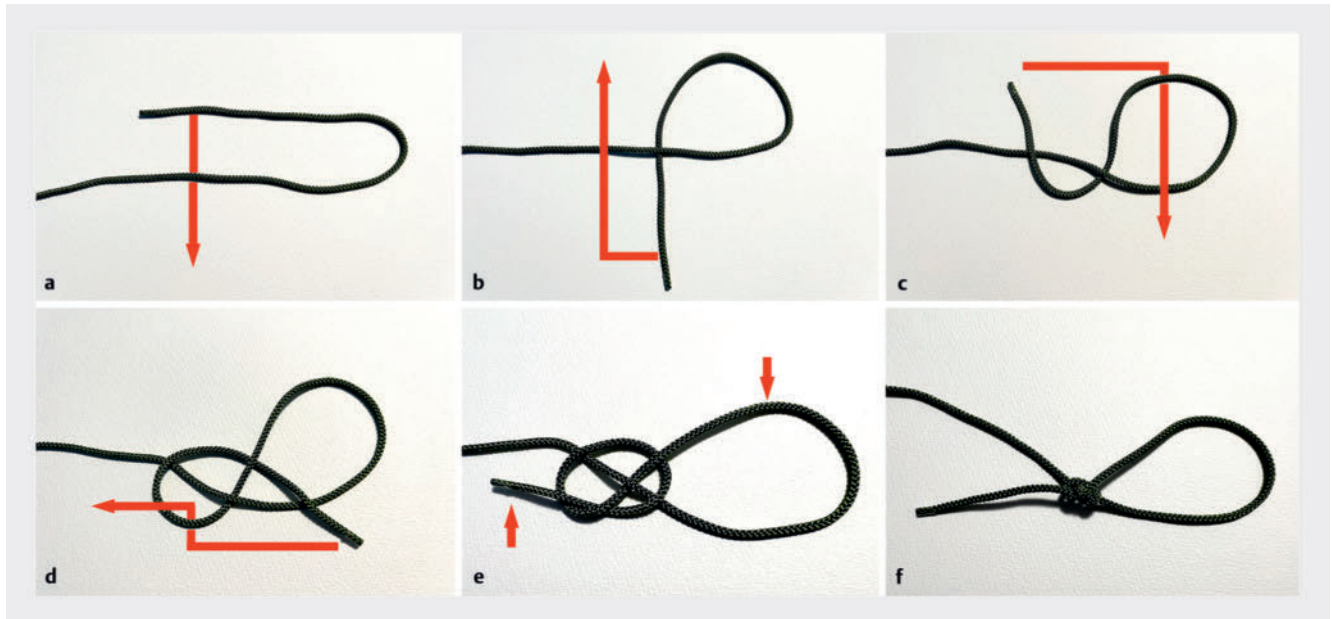


Novel adjustable traction “nose knot” method for colorectal endoscopic submucosal dissection



► Fig. 1 How to tie a “nose knot” of nylon thread. **a** Create a loop by passing the end of the thread through from the back down. **b** Move it from the front to the top left. **c** Pass it through the right loop from the back. **d** Pass it through the lower left loop from the back. **e** Finally, tighten the thread at the end and the top of the right loop. **f** Completed.

Traction techniques effectively aid in endoscopic submucosal dissection (ESD) by maintaining satisfactory traction during dissection [1]. We previously reported the usefulness of the pocket creation method using a traction device (PCM with TD) for colorectal ESD [2,3]. PCM with TD achieves stable en bloc resection and R0 dissection rates without adverse events. However, a single device may not provide sufficient traction, particularly in cases involving large lesions or a high degree of fibrosis. In these cases, additional traction is required, which increases the procedure difficulty. There are few previous reports on traction devices with adjustable traction force [4]. Herein, we present a novel traction device that enables adjustable traction through a method of ligating nylon threads, known as a “nose knot” (► Fig. 1).

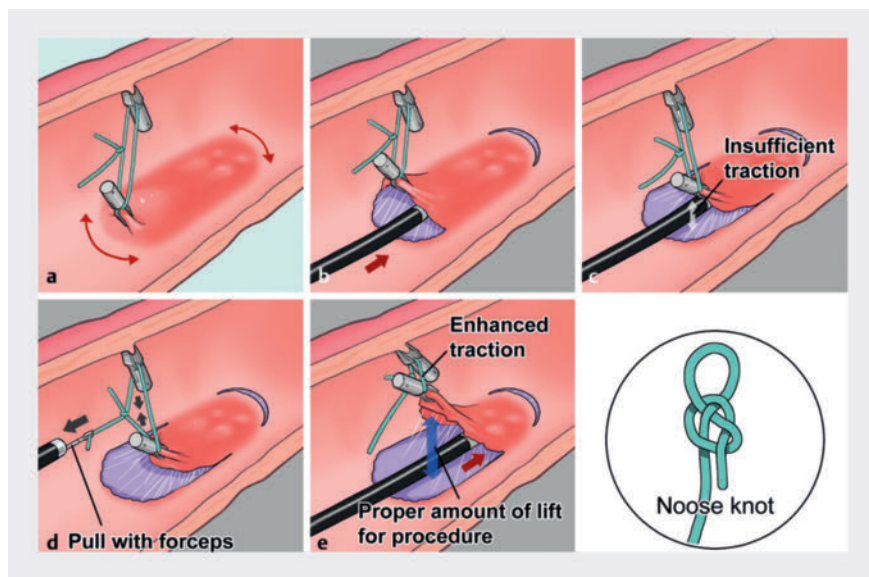
A 40-year-old woman presented with bloody stools and underwent lower gastrointestinal endoscopy, which revealed

a 25-mm sessile serrated lesion in the ascending colon. Colorectal ESD was performed on the lesion using PCM with TD. ► Fig. 2 a and ► Fig. 2 b show the schemas of the PCM with TD [2]. Attaching the traction device to the anal side of the lesion and applying traction in the appropriate direction provides an adequate visual field, which enables the submucosal layer to be approached with ease. However, as in the present case, an adequate visual field may not be sustained during the procedure because of reduced traction (► Fig. 2 c). Therefore, the nylon threads of the traction device were ligated as shown in ► Fig. 1, allowing for increased traction by reducing the size of the ring during the procedure (► Fig. 2 d, e). Consequently, the tumor was resected en bloc without complications (► Video 1). Pathological examination revealed a sessile-serrated lesion and confirmed complete resection of the tumor.



► Video 1 Preparation of the “nose knot” traction device for colorectal endoscopic submucosal dissection.

This “nose knot” traction device demonstrated an effective and concise method for enhancing traction. This method can be applied in any situation where



► **Fig. 2** Schema of the pocket-creation method with a “noose knot” traction device. **a** The double arrow shows the incision line. The traction device stretches the mucosal and submucosal layers to facilitate creation of a mucosal flap and rapid formation of a submucosal pocket by incision. **b** After the mucosal pocket is created, an adequate visual field is obtained, which enables the submucosal layer to be approached with ease. **c** An adequate visual field may not be sustained during the procedure due to reduced traction. **d** Pulling the tip of the nylon thread of the “noose knot” traction device with forceps reduces the size of the ring. **e** More substantial traction is possible by reducing the size of the ring. Source: Medical Fig.

device in endoscopic submucosal dissection for residual or recurrent colorectal lesions. *Clin Endosc* 2022; 55: 655–664. doi:10.5946/ce.2022.009

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traction is required during ESD of the gastrointestinal tract.

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Conflict of Interest

The authors declare that they have no conflict of interest.

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