

## Dual-functional use of thread delivery hood for traction-assisted rectal endoscopic submucosal dissection and defect closure

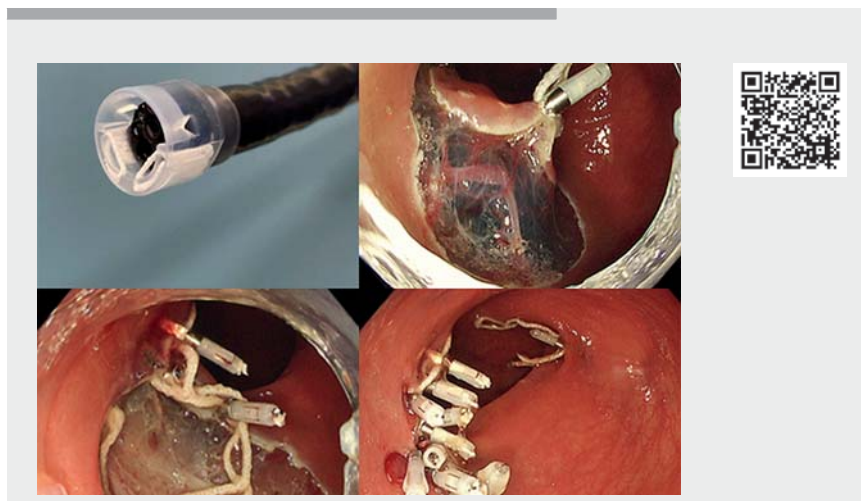


► **Fig. 1** Dual Traction Hood, which has dual threads with multi-rings inside the cap.

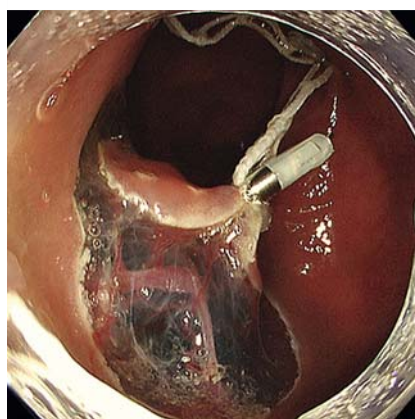


► **Fig. 2** Rectal endoscopic submucosal dissection was performed on a neuroendocrine tumor 8 mm in diameter.

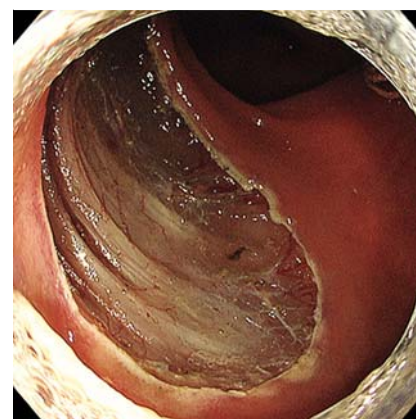
Endoscopic closure of an artificial defect after colorectal endoscopic submucosal dissection (ESD) is useful in preventing adverse events [1], with several closure methods having been developed [2,3]. While the use of traction facilitates ESD [4], no devices currently exist that can facilitate both traction and closure. An elastic thread delivery hood (Dual Traction Hood; Adachi Co., Ltd., Osaka, Japan and Nomura Medical Device Co., Ltd., Nagano, Japan) that has dual threads with multi-rings inside the cap has been developed for traction use (► **Fig. 1**) [5]. We describe a case in which this device



► **Video 1** A Dual Traction Hood was used successfully for traction as well as closure in a rectal endoscopic submucosal dissection.



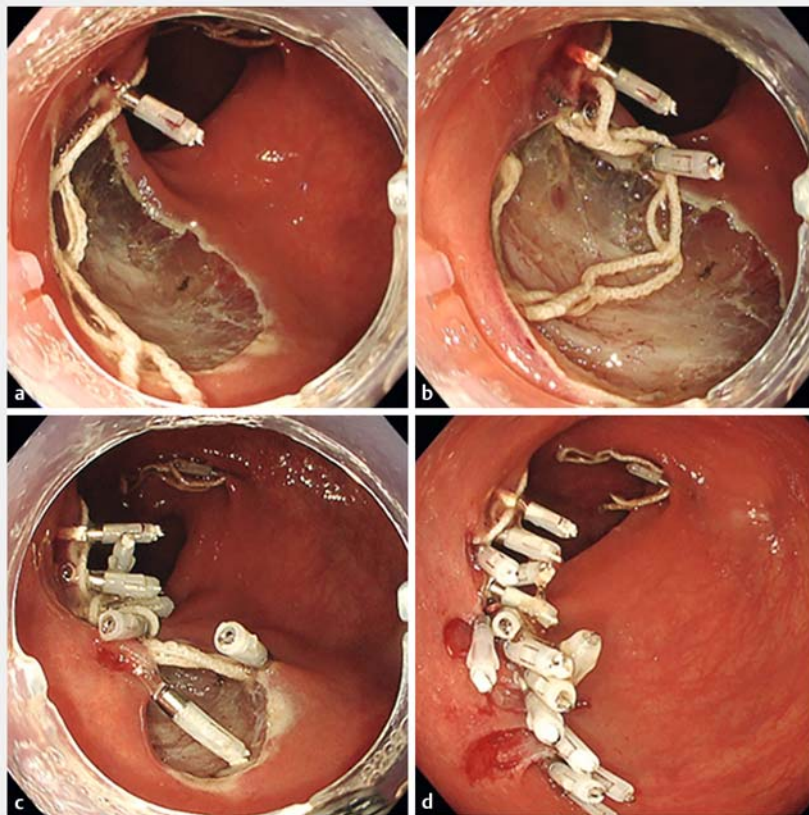
► **Fig. 3** Traction facilitated rectal endoscopic submucosal dissection after the thread was fixed to the edge of the pocket and opposite the normal mucosa using hemoclips.



► **Fig. 4** An artificial defect 30 mm in diameter after endoscopic submucosal dissection.

was used successfully for traction as well as closure in a rectal ESD (► **Video 1**). A 65-year-old man presented with a rectal neuroendocrine tumor (► **Fig. 2**). Rectal ESD was performed using a Dual Traction Hood as follows. The first thread was used for the traction. After a submucosal pocket was created followed by a whole

circumferential incision, the thread was released from the hood using a hemoclip (HX-610-090; Olympus, Tokyo, Japan). Using hemoclips, the thread was then fixed to the edge of the pocket and the opposite normal mucosa (► **Fig. 3**). Traction-assisted ESD was completed successfully, leaving an artificial defect 30 mm wide (► **Fig. 4**).



► **Fig. 5** a–c One ring of the thread was anchored to the defect edge using a hemoclip, and another ring was anchored to the opposite edge. The defect was approximated by these hemoclips. The thread was then anchored to both edges in a zig-zag pattern. d Complete closure was achieved using additional hemoclips.

The second thread was used to close the defect post-ESD. One ring of the thread was anchored to the defect edge using a hemoclip, and another ring was anchored to the opposite edge. The procedure was repeated in a zig-zag pattern while the thread was attached to both edges. Consequently, the defect was approximated by these hemoclips. Complete closure was achieved with additional hemoclips (► **Fig. 5**). The ESD and closure took 20 and 15 minutes, respectively. The Dual Traction Hood enabled clinicians to achieve both traction-assisted ESD and endoscopic defect closure. This method may become an effective option in facilitating ESD and preventing delayed complications.

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## Competing interests

The authors declare that they have no conflict of interest.

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