

## Endoscopic removal of an Endoloop entrapped around a polyp in the right colon using Novel “threading technique”

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### Introduction

Detachable Endoloops were first invented in 1986 (1) and became available for commercial use in the early 1990s (2). They were initially recommended for the control of bleeding which was later extended for prophylaxis of post-polypectomy bleeding also (3-7). The most common complications associated with detachable Endoloops are failure of snare to close around a polyp and bleeding caused by accidental transection of polyps by aggressive snare closure (5). Failure of an Endoloop to deploy once it is tightened around a polyp stalk is a more worrisome complication with minimal management discussion reported in the literature.

### Case Report

A 63 year old gentleman was being evaluated for personal history of polyps. A 1.5 cm pedunculated polyp with a thick 1cm stalk was identified in the ascending colon. To prevent post-polypectomy bleeding, a 30 mm diameter detachable endoloop was placed and tightened at the polyp base. The releasing mechanism malfunctioned after the Endoloop was tightened, making it impossible to detach or remove the Endoloop device (Fig. 1). The colonoscope could not be withdrawn with the handle of the Endoloop device outside the accessory channel port.

The external deployment device was cut outside the endoscope at the handle freeing it from the catheter. The cut end of the catheter was then secured with a biopsy forceps. The scope was then pulled out over the catheter while securing the cut end of the catheter with a biopsy forceps until it was retrieved at the anus (Diagram 1a-4a). An endoscope with a polypectomy snare was placed over and around the retained Endoloop catheter outside the anus and threaded along the retained Endoloop catheter through the colon all the way to the polyp base (Diagram 1b-2b and Fig. 2). By using this technique, the snare loop could be easily maneuvered over the head of a polyp, passed the undetached Endoloop, and positioned at the stalk base. The polyp was then resected using endocut, and removed along with attached Endoloop. The Endoloop was retrieved still attached to the resected polyp thus averting the need for surgery.



Fig. 1. —

### Discussion

Endoloops have been proved useful to generate hemostasis, prevent bleeding and to close perforations previously clamped together with clips (8). Endoloops might also be useful to prevent bleeding from polyps with thick stalks. Detachable snares should be used with caution and with understanding of their limitations. Technicians and physicians should be well familiar with deployment method and endoloop function. In order to avoid incidental transection of polyps, the silicon stopper should be identified and used as a landmark to assess optimal loop approximation to the polyp.

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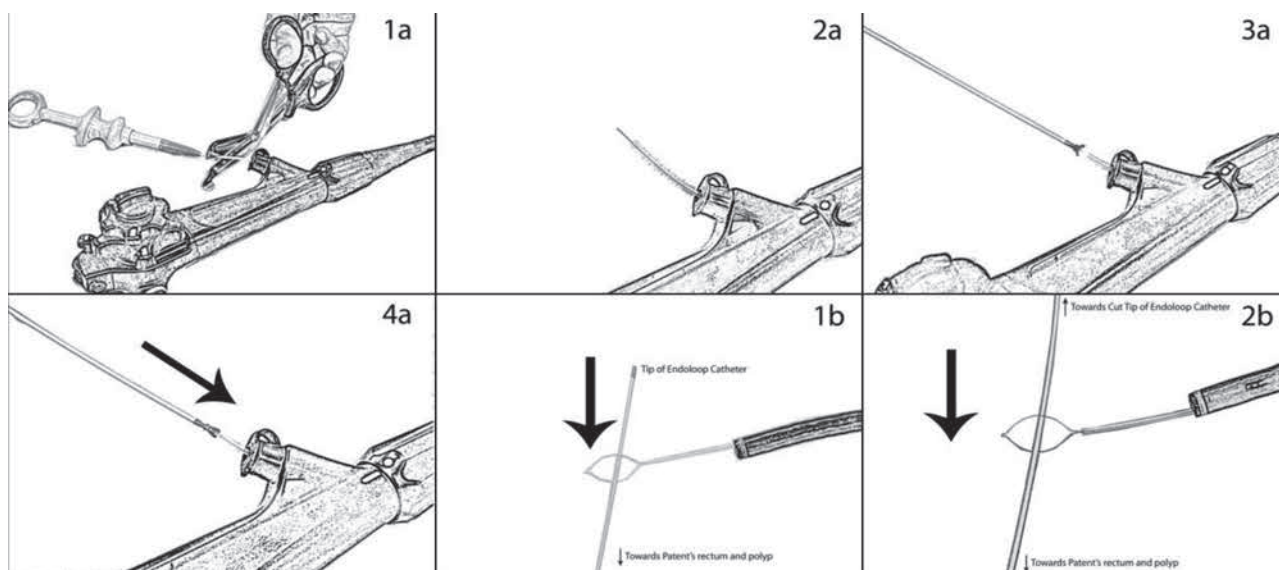


Diagram 1. — The handle of the detachable Endoloop is cut outside the endoscope channel (1a). The distal tip of the cut Endoloop catheter is seen (2a). A biopsy forceps is used to grasp distal tip of Endoloop catheter (3a). The Endoloop catheter is pushed into the channel of the endoscope while the endoscope is removed at the same rate. This is done to avoid incidental transaction of the polyp while the endoscope is removed (4a). Once the endoscope is entirely removed, a polypectomy snare is placed through the channel and opened around the distal tip of the cut Endoloop catheter outside the anus (1b) threaded over the Endoloop catheter and advance to the polyp base (2b).

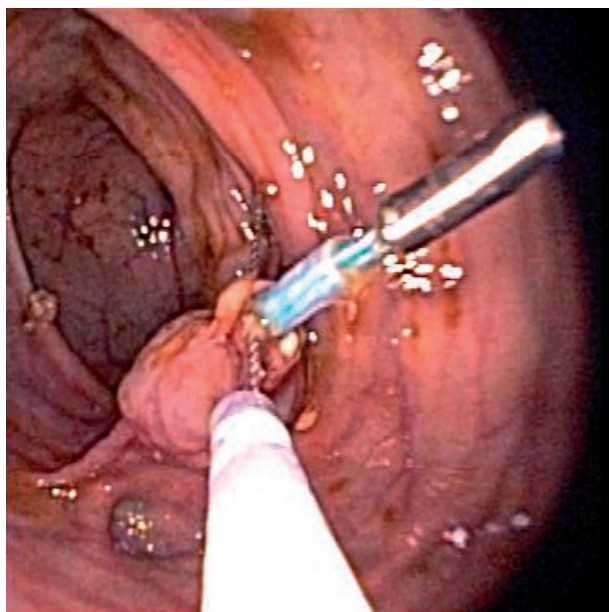


Fig. 2. —

Fry *et al.*, described a similar case where an Endoloop did not deploy. Since the polyp was located in left colon they used a double scope technique and a needle knife to cut the polyp at the base (9). However, for the Endoloop failure in the right colon, such an approach can be difficult with an added risk of complication. We recommend

cutting the deployment portion of the device outside the endoscope, thus freeing it from the catheter. The endoscope can then be removed leaving the Endoloop and catheter within the colon as described in our case. A colonoscope can then be re-introduced following the retained Endoloop catheter to the polyp site. An endoscopic ligating devices such as endoscopic scissors or needle-knife can then be utilized to cut through plastic Endoloop or polyp directly ; however, risk of bleeding and perforation would be increased. Alternatively a polypectomy snare can be utilized and threaded over the retained Endoloop catheter along with endoscope as described in our case. We found it much easier to manipulate and position the snare over the polyp with this approach.

## References

1. PONTECORVO C., PESCE G. The "safety snare" : a ligature-placing snare to prevent haemorrhage after transaction of a large pedunculated polyps. *Endoscopy*, 1986, **18** : 55-56.
2. HACHISU T. A new detachable snare for hemostasis in the removal of large polyps or other elevated lesions. *Surg. Endosc.*, 1991, **5** : 70-74.
3. KATSINELOS P., KOUNTOURAS J., PAROUTOGLOU G. *et al.* Endoloop-assisted polypectomy for large pedunculated colorectal polyps. *Surg. Endosc.*, 2006, **20** : 1257-1261.
4. BRANDIMARTE G., TURSI A. Endoscopic snare excision of large pedunculated colorectal polyps : a new safe and effective technique. *Endoscopy*, 2001, **33** : 854-857.
5. REY J.F., MAREK T.A. Endoloop in the prevention of the postpolypectomy bleeding : preliminary results. *Gastrointest. Endosc.*, 1997, **46** : 387-389.
6. IISHI H., TATSUTA M., NARAHARA H. *et al.* Endoscopic resection of large pedunculated colorectal polyps using a detachable snare. *Gastrointest. Endosc.*, 1996, **47** : 594-597.

7. MURRAY M., KWAN V., WILLIAMS J.S. *et al.* Detachable nylon loop assisted removal of large clinically significant colonic polyps. *Gastrointest. Endosc.*, 2005, **61** : 756-759.
8. DI GIORGIO P., DE LUCA L., CALCAGNO G. *et al.* Detachable snare versus epinephrine injection in the prevention of postpolypectomy bleeding : a randomized and controlled study. *Endoscopy*, 2004, **36** : 860-863.
9. FRY L., LOUDON R., LINDER J. *et al.* Endoscopic removal of a snare entrapped around a polyp by using a dual endoscope technique and needle-knife. *Gastrointest. Endosc.*, 2003, **57** : 126-128.