



Band ligation-assisted endoscopic mucosal resection of an intradiverticular polyp

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INTRODUCTION

With over 140,000 new colorectal cancer cases anticipated in 2020 by the American Cancer Society, colonoscopy remains a standard of care in the screening and further evaluation of precancerous colorectal lesions.¹ Although a trained gastroenterologist is able to routinely perform screening colonoscopies as part of daily practice, the location of some polypoid lesions might pose a challenge.

Colonic diverticula pose a particular challenge because they lack or have a weakened layer of muscularis propria owing to focal wall weakness and increased intraluminal pressures,² thus increasing the risk of perforation with intervention. We present the case of a healthy 50-year-old man who was seen for routine colonoscopy and was

found to have diverticular disease and a polyp arising from a diverticulum in the descending colon.

CASE REPORT

A healthy patient presented to the endoscopy suite for routine colonoscopy. The examination showed diverticulosis of the sigmoid colon and, within the descending colon, a 7-mm polyp within the base of a diverticulum. The adjacent area was tattooed with India ink, and the remainder of the screening colonoscopy was completed and the colonoscope was withdrawn. At this time, the colonoscope was exchanged, and a single-channel upper forward-viewing endoscope (GIF-HQ190, Olympus, Tokyo, Japan) with a band ligating device attached to its tip (MBL-6-XL-C, Cook Medical, Bloomington, Ind, USA) was subsequently used.

The diverticulum with the attached polyp was found by drawing attention to the mucosa previously marked with India ink within the descending colon (Fig. 1). Once the diverticulum was identified, full intermittent suction was performed to drive the diverticulum into the device, with resulting inversion of the diverticulum and the polyp. Intermittent suction allowed us to minimize the possibility of muscularis propria being present within the banded tissue.

A single rubber band was deployed on the colonic wall from which the diverticulum originated (Fig. 2). After confirming the banding, the polyp was subsequently resected via hot snare polypectomy performed at the surface of the diverticulum, leaving the diverticulum intact with complete removal of the polyp and an R0 margin.



Figure 1. Descending colonic diverticulum containing sessile polyp.

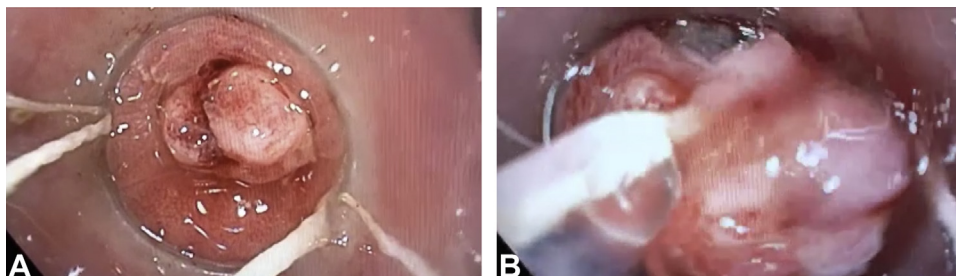


Figure 2. A, Identification of polyp after inversion of diverticulum via endoscopic suction. **B,** Ligation of sessile polyp at its base by using an endoscopic ligating device.

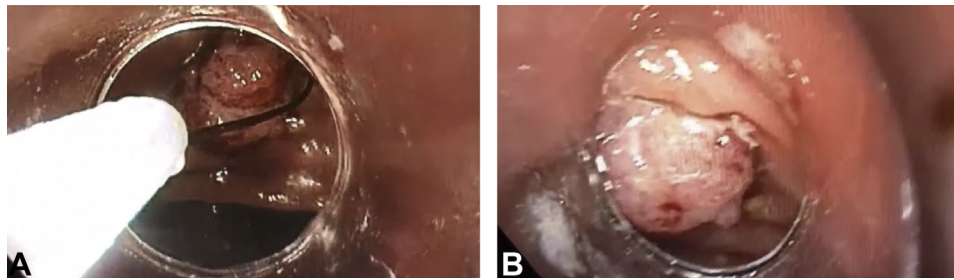


Figure 3. **A**, Hot snare polypectomy performed on inverted diverticular polyp. **B**, Base of diverticulum after hot snare polypectomy.

The diverticulum was then retrieved for further histological examination, which revealed tubular adenoma (Fig. 3).

The patient tolerated the procedure well without any further adverse events and was discharged home on the same day. One week after the procedure, the patient was contacted and reported that he remained symptom free.

CASE DISCUSSION

Techniques to remove early neoplasms of the GI tract include polypectomy, endoscopic mucosal resection, endoscopic submucosal dissection, and, recently, the use of a full-thickness resection device. However, polyps arising within or near colonic diverticula pose an increased challenge to the gastroenterologist because of the increased risk of perforation. To minimize this risk, new techniques such as endoscopic full-thickness resection have been developed, which allows for complete resection of the lesion³; nevertheless, despite its increased availability, it still requires additional training and poses additional costs.

Alternative techniques, including band ligation of suspected lesions, have also been proposed to allow for induced ischemia and necrosis, resulting in the ligated contents falling off. However, as presented by Carmo et al,⁴ using band ligation alone limits histopathological analysis because no specimen is collected.

By using the technique presented here, the polyp is safely removed and can still be sent for further histopathological analysis. The techniques and instruments readily available to the majority of gastroenterologists can be

used, and no additional costs are incurred in comparison with full-thickness resection device usage (Video 1, available online at www.giejournal.org).

DISCLOSURE

All authors disclosed no financial relationships.

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<https://doi.org/10.1016/j.vgie.2020.11.017>