



# Endoscopic transcecal appendectomy for the treatment of low-grade appendiceal mucinous neoplasm CME

Zhijie Jiang, MD,<sup>1</sup> Bing Hu, MD,<sup>2</sup> Hui Gong, MD,<sup>3</sup> Yi Mou, MD<sup>2</sup>

Chengdu, China

**Background and Aims:** Appendiceal lesions are a common cause of abdominal pain. The most prevalent pathologic entities are inflammatory lesions, whereas neoplastic lesions are relatively uncommon. Appendiceal mucinous neoplasms (AMNs) are rare neoplastic tumors found in appendectomy specimens. Previously, appendectomy was required for appendiceal lesions. Endoscopic transcecal appendectomy (ETA) is a novel approach that allows the appendiceal lesion to be completely resected and prevents postoperative appendicitis. This case presents ETA as an alternative for management of low-grade AMNs.

**Methods:** In this case, ETA was applied to the patient's appendiceal lesion. The ETA procedure involved the following steps: full-thickness resection of the lesion after marking, dissection and cutting off of the mesoappendix and appendicular artery, insertion of a second endoscope for continuous dissection, and closure of the defect.

**Results:** The patient was discharged after improvement. Follow-up colonoscopy was performed at 6 months and showed healing of the resection site.

**Conclusions:** ETA can serve as a viable alternative for appendiceal lesions unsuitable for polypectomy and as an option to surgical appendectomy. Because ETA can allow maximum preservation of the ileocecal valve and intestine, it leaves no scar on the abdomen and has no adverse event associated with surgical incision. (VideoGIE 2026;11:75-8.)

A 60-year-old woman was referred to our hospital after a 2.5-cm submucosal bulge was incidentally detected at the ileocecal region (Fig. 1) during colonoscopy. The patient has a medical history of abdominal pain and low back pain for more than 10 days. Endoscopic ultrasonography showed a hypoechoic mass with a homogeneous echo, originating from the muscularis propria (Fig. 2). The abdominal CT demonstrated appendiceal thickening.

Considering that the lesion involved the appendix, endoscopic transcecal appendectomy (ETA) was performed (Video 1, available online at [www.videogie.org](http://www.videogie.org)). A 5-cm mucosal elevation was observed in the cecum,

with the lesion involving the appendiceal orifice. Circumferential incision was made around the lesion using a dual knife (Olympus, Tokyo, Japan), followed by full-thickness dissection into the abdominal cavity. The mesoappendix was separated using a combination of a dual knife, an insulated-tip knife (Olympus), and a hook knife (Olympus) (Fig. 3), followed by complete mobilization and en bloc resection of the lesion with the appendix. The completely resected appendix was pulled into the colon and was retrieved using a snare (Fig. 4). The defect was closed with endoloops and clips using the double-layer purse-string suture technique. During the operation,

*Abbreviations:* AMN, appendiceal mucinous neoplasm; ETA, endoscopic transcecal appendectomy; LAMN, low-grade appendiceal mucinous neoplasm.

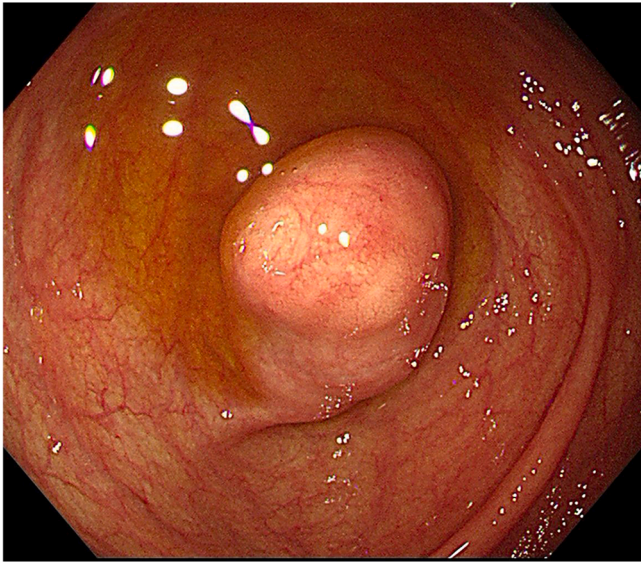
Copyright © 2026 American Society for Gastrointestinal Endoscopy. Published by Elsevier Inc. This is an open access article under the CC BY-NC-ND license (<http://creativecommons.org/licenses/by-nc-nd/4.0/>).  
2468-4481  
<https://doi.org/10.1016/j.vgje.2025.10.013>

Received July 4, 2025. Accepted October 30, 2025.

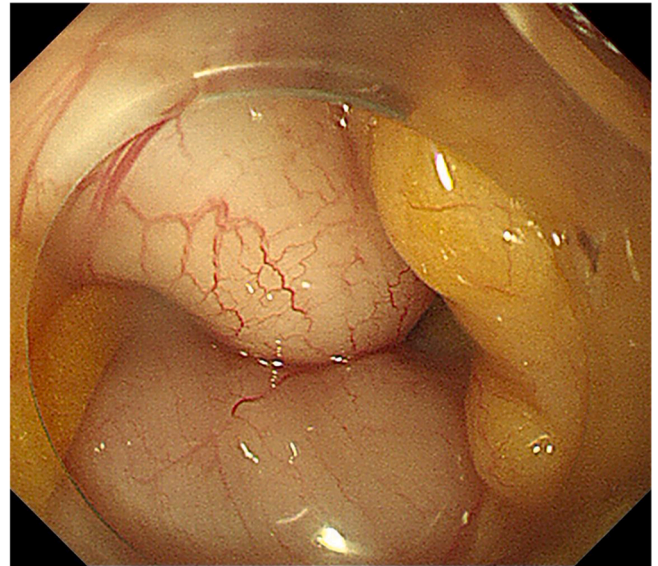
Current affiliations: West China School of Clinical Medicine, Sichuan University, Chengdu, Sichuan Province, China (1), Department of

Gastroenterology and Hepatology/Medical Engineering Integration Laboratory of Digestive Endoscopy, West China Hospital, Sichuan University, Chengdu, Sichuan Province, China (2), Integrated Care Management Center, West China Hospital, Sichuan University, Chengdu, Sichuan Province, China (3).

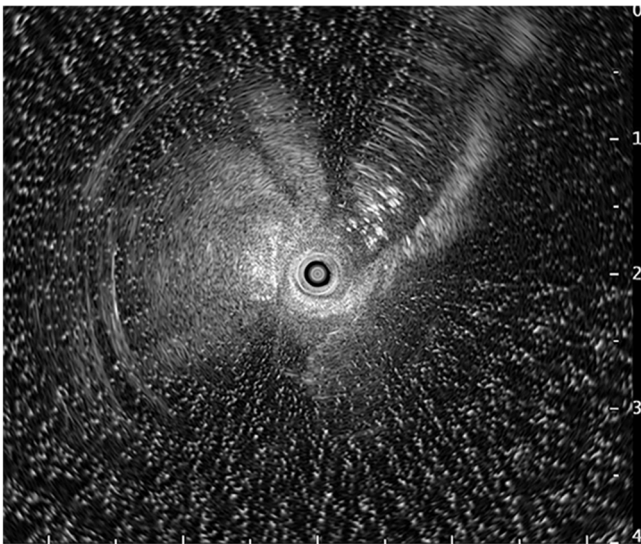
Corresponding author: Yi Mou, MD, Department of Gastroenterology and Hepatology/Medical Engineering Integration Laboratory of Digestive Endoscopy, West China Hospital, Sichuan University, No. 37 Guoxue Alley, Wuhou District, Chengdu, Sichuan Province 610041, China. E-mail: [125654639@qq.com](mailto:125654639@qq.com).



**Figure 1.** Colonoscopy revealed a 2.5-cm submucosal bulge at the ileocecal region.



**Figure 3.** The appendix being separated from the mesoappendix.



**Figure 2.** Endoscopic ultrasonography showing a hypoechoic mass with a homogeneous echo, originating from the muscularis propria.

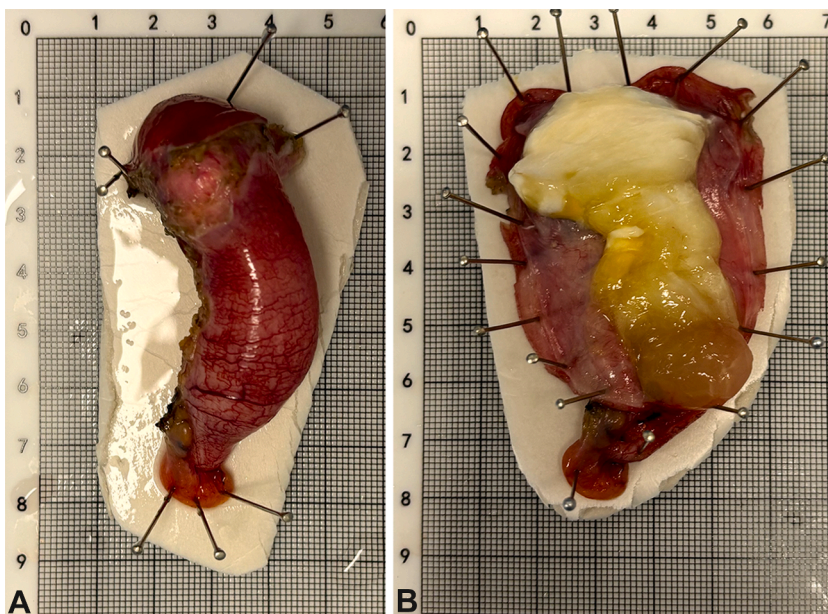
intraperitoneal gas was excluded by needle aspiration through abdominal puncture, and a rectal tube was placed for decompression.

The total operation time was 120 minutes. Pathologic examination confirmed a low-grade AMN (LAMN) (Fig. 5); all margins were negative, and there was no vascular invasion. Because of postoperative intra-abdominal infection, the patient was treated with imipenem/cilastatin (intravenously) every 8 hours during hospitalization. The patient recovered well, and no adverse events aside from infection were observed. The patient's length of stay was 5 days, and she was discharged after improvement. Follow-up colonoscopy

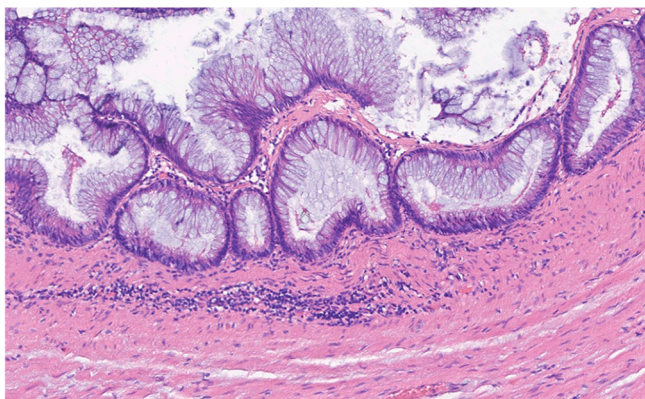
was performed at 6 months and showed healing of the resection site (Fig. 6).

We held a multidisciplinary discussion before performing the procedure, and the surgeons suggested that partial colectomy could be considered as an alternative treatment for the appendiceal orifice lesion, given its potential extension to adjacent colonic tissue. Although partial colectomy may offer a higher likelihood of achieving negative margins and complete resection due to its extensive resection range, we contend that the associated risks—such as those from the external incision, including wound infection, pain, herniation, and adhesions—cannot be overlooked. In contrast, ETA eliminates external incisions entirely, thereby avoiding these adverse events and building on the minimally invasive benefits of laparoscopic techniques. In addition, during partial colectomy, surgeons may encounter challenges in visualizing the lesion margins clearly, which can lead to extended resections in some cases to ensure negative margins. Conversely, endoscopists using ETA are better positioned to directly visualize the extent of the appendiceal orifice lesion, enabling precise resection and maximal preservation of the surrounding intestinal tissue. On the basis of this comprehensive comparison, we repeatedly informed the patient of the advantages and disadvantages of partial colectomy versus endoscopic appendectomy, and the patient expressed a preference for endoscopic resection. Before performing full-thickness appendectomy, we had considered the possibility of tumor dissemination. Therefore, we meticulously maintained the integrity of the capsule throughout the procedure, thus avoiding the formation of intraperitoneal implantation metastasis and pseudomyxoma peritonei.

Appendiceal mucinous neoplasms (AMNs) are rare tumors accounting for less than 1% of all cancers<sup>1</sup> and are

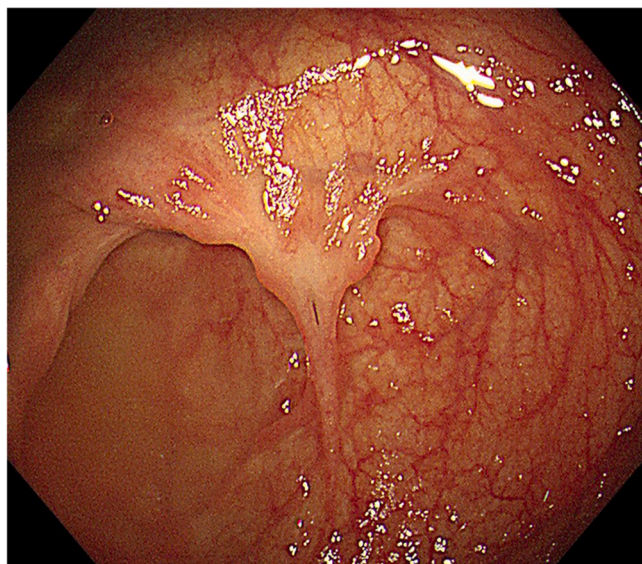


**Figure 4.** **A,** The resected appendix, measuring 3 × 6 cm. **B,** After incision of the appendix, measuring 5.0 × 6.0 cm.



**Figure 5.** Histologic view of the resected lesion revealing a low-grade appendiceal mucinous neoplasm (hematoxylin and eosin, orig. mag. ×200).

present in 0.2% to 0.3% of appendectomy specimens.<sup>2</sup> AMNs most commonly arise from LAMNs, which are adenomatous changes in the appendiceal mucosa. Most of the published literature suggests that appendectomy is required for LAMNs.<sup>3</sup> Previous studies have shown that ETA is feasible in the management of appendiceal orifice lesions.<sup>4</sup> We present here a successful case of ETA as a viable alternative. Further prospective studies and long-term follow-ups are needed to confirm its safety and efficacy.



**Figure 6.** Postoperative colonoscopy 6 months later showing healing of the resection site.

**PATIENT CONSENT**

Written informed consent was obtained from the patient to publish these images and video.

## DISCLOSURE

The following authors disclosed financial relationships: B. Hu: Supported by the science and technology project of Sichuan Provincial Health (Commission grant no. 23LCYJ037). Y. Mou: Supported by the 1·3·5 project for disciplines of excellence—Clinical Research Fund, West China Hospital, Sichuan University (2024HXFH033). All other authors disclosed no financial relationships.

## ACKNOWLEDGMENTS

We acknowledge the support from the 1·3·5 project for disciplines of excellence—Clinical Research Fund, West China Hospital, Sichuan University (2024HXFH033), and

the science and technology project of Sichuan Provincial Health Commission (grant no. 23LCYJ037).

## REFERENCES

1. Shaib WL, Assi R, Shamseddine A, et al. Appendiceal mucinous neoplasms: diagnosis and management. *Oncologist* 2017;22:1107-16.
2. Smeenk RM, van Velthuysen MLF, Verwaal VJ, et al. Appendiceal neoplasms and pseudomyxoma peritonei: a population based study. *Eur J Surg Oncol* 2008;34:196-201.
3. Yantis RK, Shia J, Klimstra DS, et al. Prognostic significance of localized extra-appendiceal mucin deposition in appendiceal mucinous neoplasms. *Am J Surg Pathol* 2009;33:248-55.
4. Guo L, Ye L, Feng Y, et al. Endoscopic transcecal appendectomy: a new endotherapy for appendiceal orifice lesions. *Endoscopy* 2022;54:585-90.