

Successful Management of Recurrent Malignant High-Grade Anastomotic Recto-sigmoid Stricture with Non-cautery Enhanced Lumen-apposing Metal Stent

Debdeep Banerjee, MD1; Usman Barlass, MD1; Ramzi Mulki, MD1; Devin Harrison, CRNP1; Frederick Weber Jr, MD1; Gregory Kennedy, MD, PhD2; Kondal R. Kyanam Kabir Baig, MD1; Sergio A. Sánchez-Luna, MD1
1 Basil I. Hirschowitz Endoscopic Center of Excellence, Division of Gastroenterology and Hepatology, 2 Division of Gastrointestinal Surgery

Introduction

Recurrent malignant anastomotic strictures, especially close to the rectum, are challenging to treat. Lumen-apposing metal stents (LAMS) have been increasingly used for benign strictures. Data in malignant strictures is limited. We report a case successfully treated by non-cautery enhanced LAMS.

Case Description & Technique

A 54-year-old man with a history of rectosigmoid adenocarcinoma with low anterior resection, adjuvant chemoradiation, and local recurrence with progression to peritoneal carcinomatosis presented with the complaints of intermittent nausea, vomiting, and abdominal distention.

A small bowel follow-through did not show an obstruction but a Gastrografin enema revealed a rectosigmoid anastomotic stricture. Sigmoidoscopy confirmed a high-grade stricture, 0.4 cm (diameter) x < 1 cm (length) at an end-to-end colo-colonic anastomosis, 10 cm from the anus. This was balloon dilated to 16.5 mm using an over-the-wire technique and traversed showing severe upstream colonic dilation. Stricture biopsies showed evidence of at least high-grade dysplasia. Symptoms improved for a month after which they recurred. Interval positron emission tomography scan revealed hypermetabolic recurrent rectosigmoid tumor.

After a multidisciplinary discussion, he was deemed a high-surgical risk candidate. Due to proximity to the anus and long-term life expectancy, a LAMS placement was planned. Stricturegram on repeat colonoscopy using a dual-channel gastroscope confirmed < 1 cm length stricture. A 20 x 10 mm LAMS system was exchanged over-the-wire. Using a non-cautery technique both flanges were deployed across the stricture, followed by balloon dilation to 18 mm with improvement in luminal narrowing and decompression of the upstream colon. At 5-month follow-up, the patient continues to do well with the resolution of obstructive symptoms.

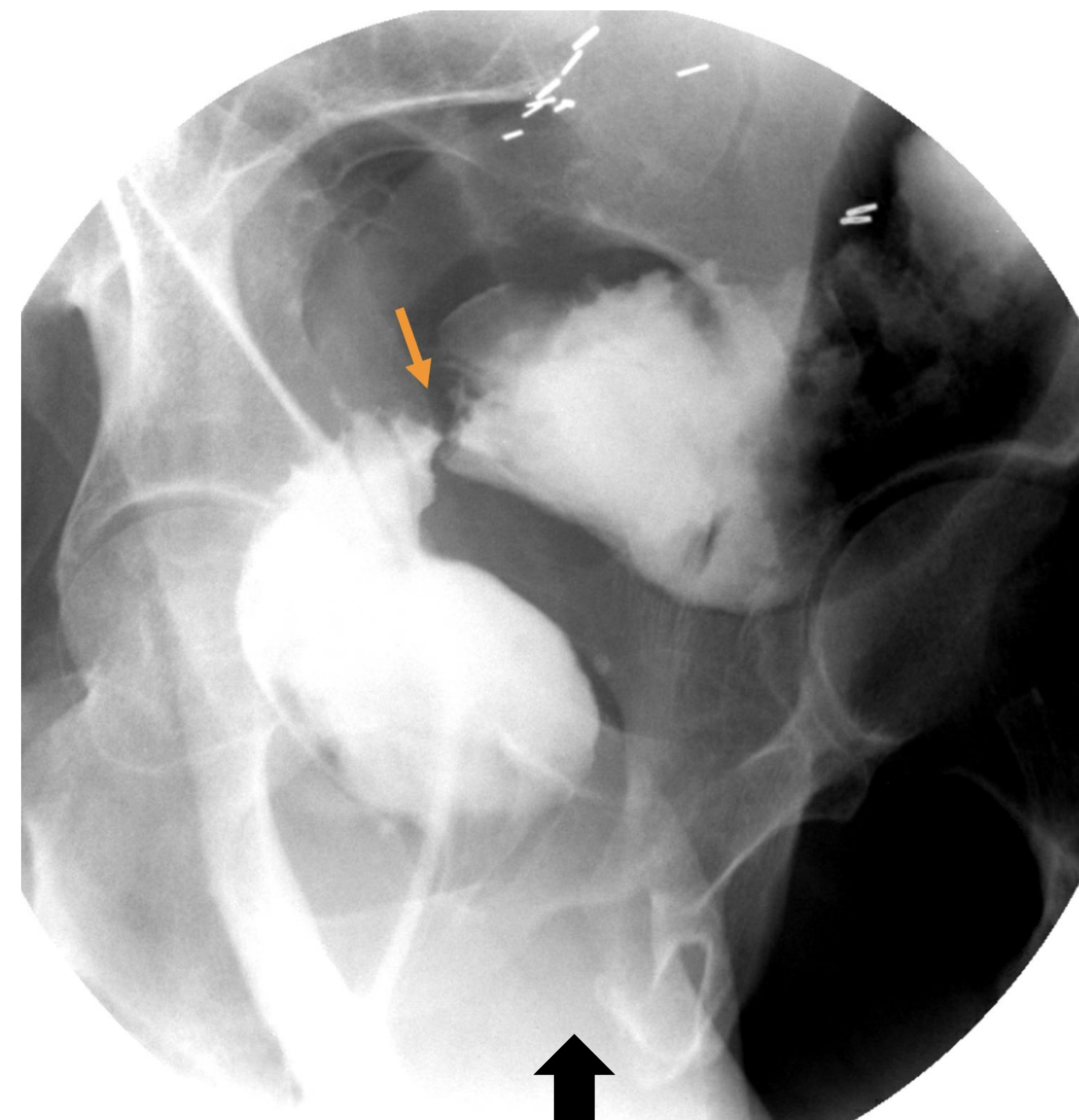


Figure 1

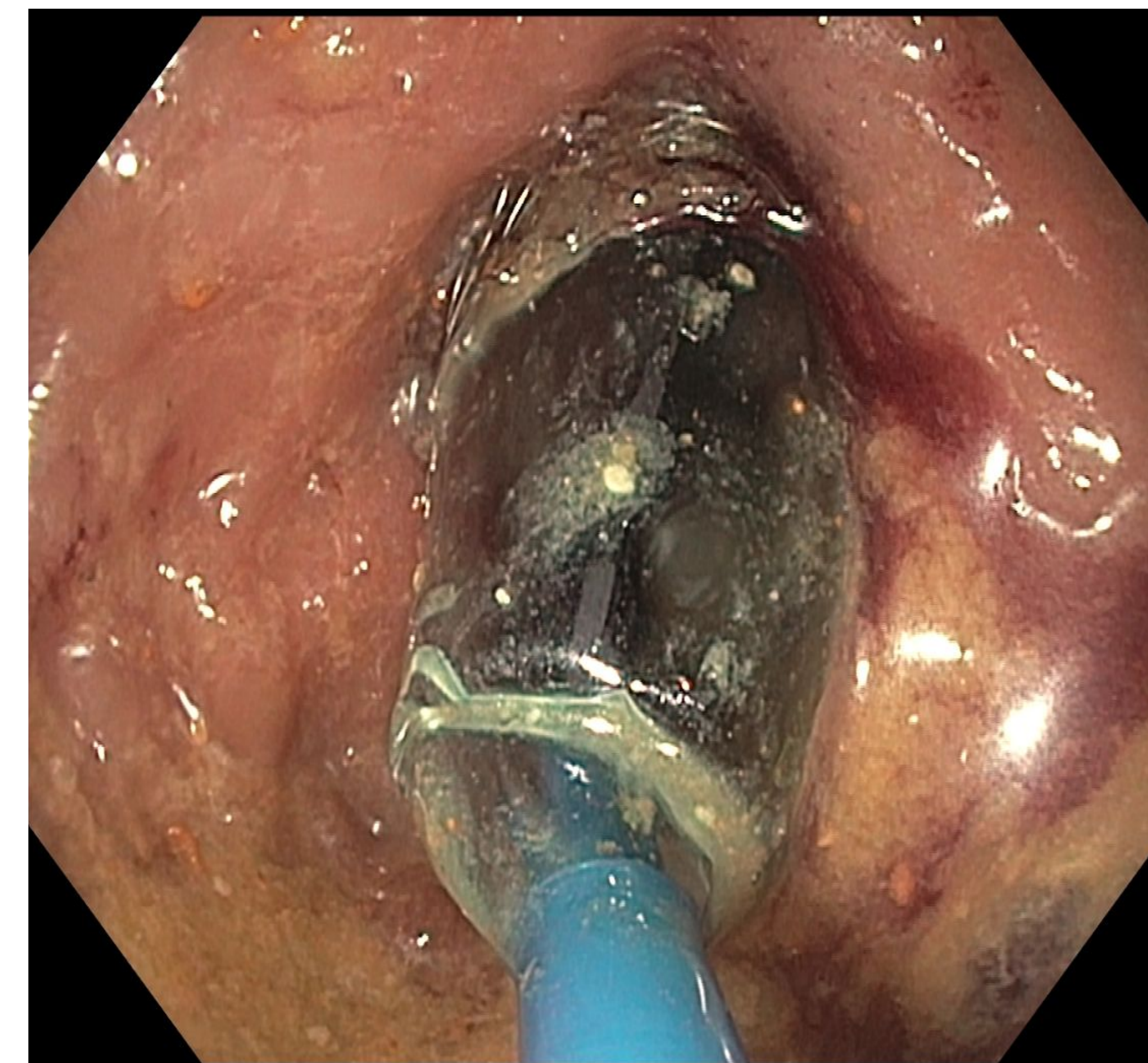


Figure 3

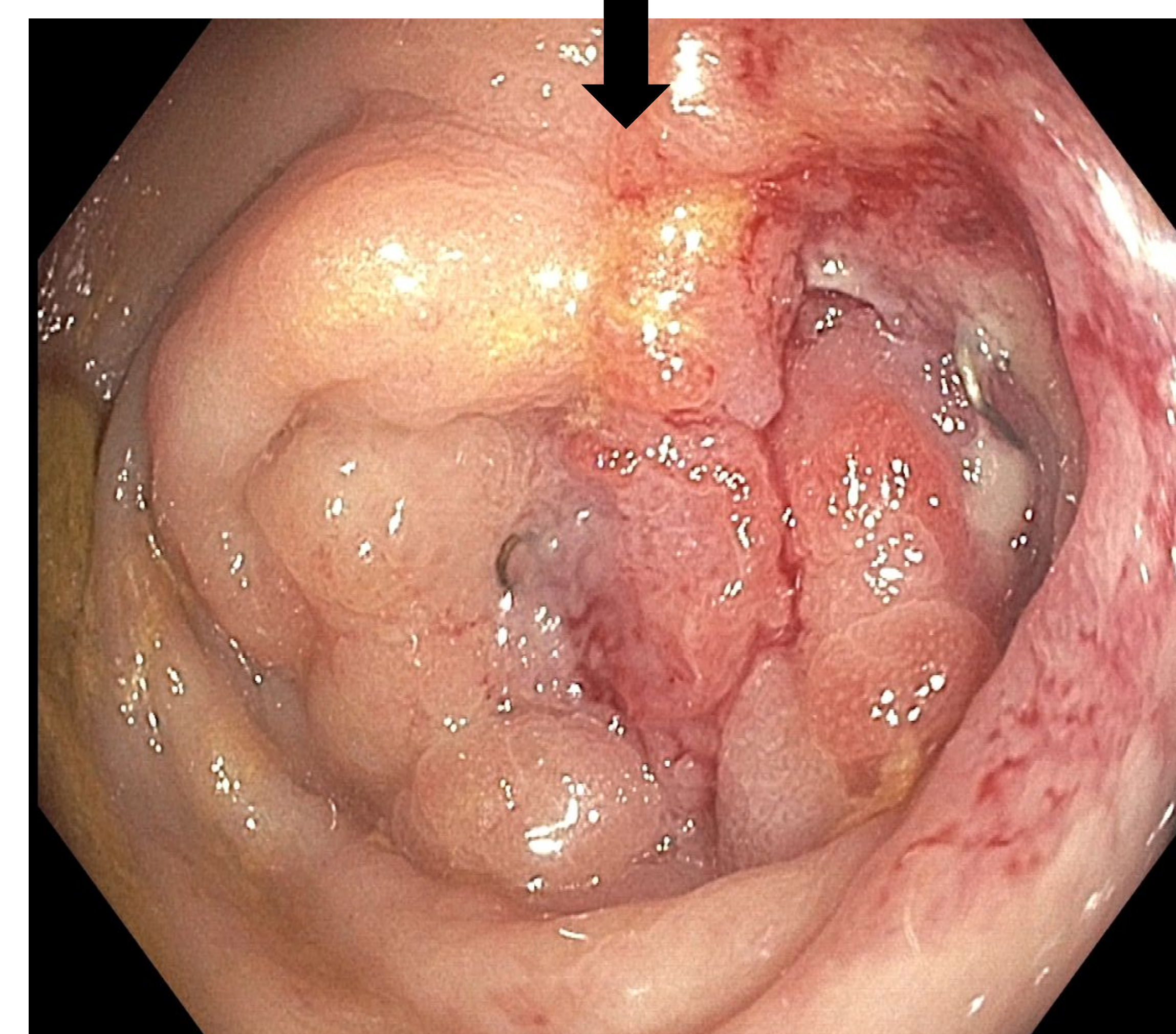


Figure 2

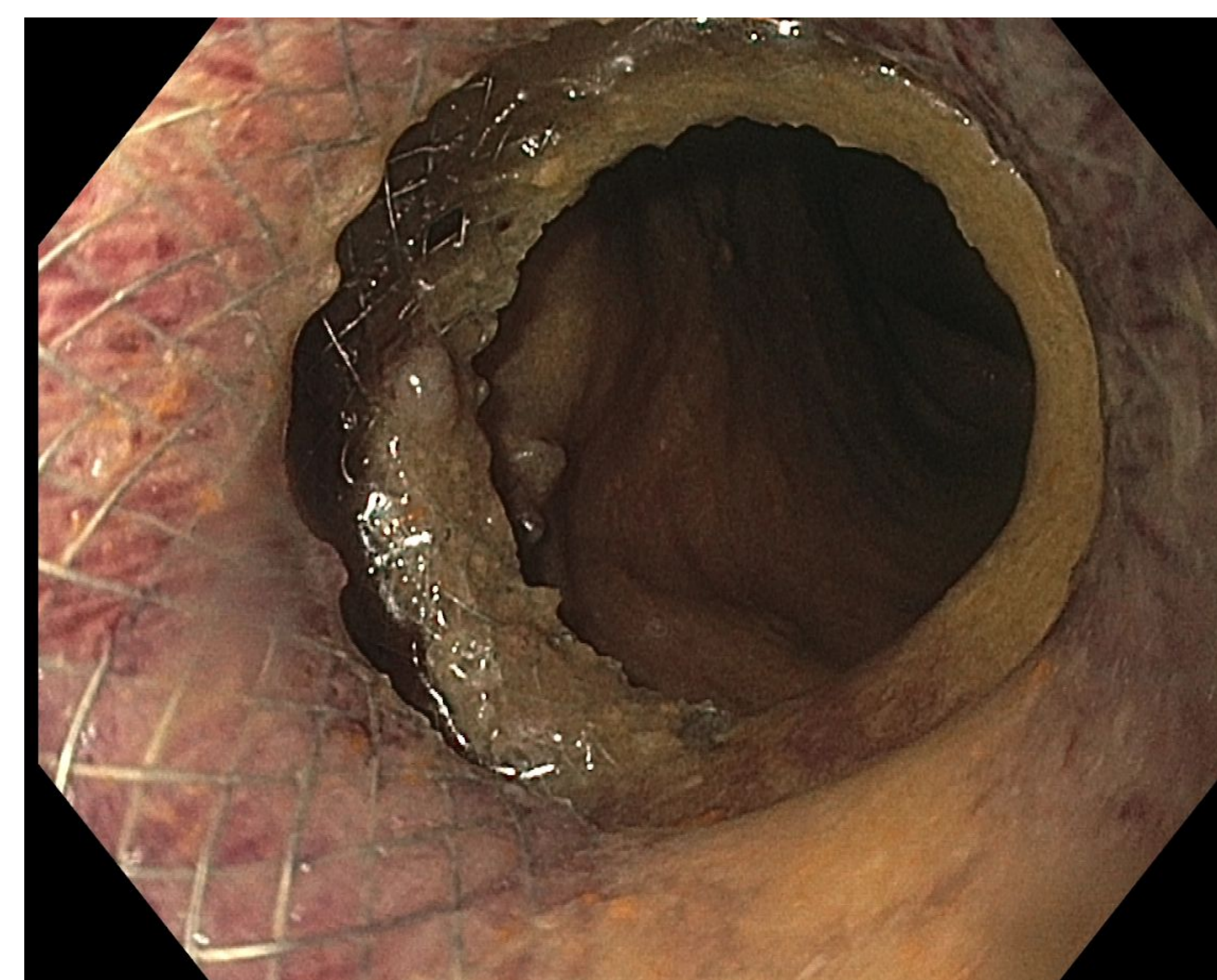


Figure 4

Discussion

Malignant recurrence at post-surgical anastomotic sites is difficult to manage surgically, especially with peritoneal involvement. Palliative endoscopic options are limited to dilation or uncovered self-expanding metal stents (uSEMS). Due to their longer length, the role of uSEMS is limited in strictures close to the anus (< 10 cm) due to the occurrence of pain and tenesmus. LAMS with their short length and fully covered nature can provide a longer-lasting alternative with the avoidance of adverse effects. To our knowledge, this is the first report using LAMS for a distal colonic malignant post-surgical anastomotic stricture.

References

- Bazerbachi, F., Heffley, J. D., Abu Dayyeh, B. K., Nieto, J., Vargas, E. J., Sawas, T., Zaghlol, R., Buttar, N. S., Topazian, M. D., Wong Kee Song, L. M., Levy, M., Keilin, S., Cai, Q., & Willingham, F. F. (2017). Safety and efficacy of coaxial lumen-apposing metal stents in the management of refractory gastrointestinal luminal strictures: a multicenter study. *Endoscopy international open*, 5(9), E861–E867. <https://doi.org/10.1055/s-0043-114665>
- Coles, M., Uy, P., Madray, V., Yap, J. E., & Sridhar, S. (2021). The Off-Label Use of a Lumen-Apposing Metal Stent (LAMS) for a Benign Colon Anastomotic Stricture Causing Recurrent Bowel Obstruction in a Patient with Keloids. *Case reports in gastrointestinal medicine*, 2021, 5595518. <https://doi.org/10.1155/2021/5595518>
- Mai, H. D., Dubin, E., Mavanur, A. A., Feldman, M., & Dutta, S. (2018). EUS-guided colo-enterostomy as a salvage drainage procedure in a high surgical risk patient with small bowel obstruction due to severe ileocolonic anastomotic stricture: a new application of lumen-apposing metal stent (LAMS). *Clinical journal of gastroenterology*, 11(4), 282–285. <https://doi.org/10.1007/s12328-018-0837-5>
- Reddy, R., Patel, U., Tarnasky, P., & Kedia, P. (2018). Lumen-apposing stent placement for management of a short benign colonic anastomotic stricture. *VideoGIE: an official video journal of the American Society for Gastrointestinal Endoscopy*, 3(3), 99–101. <https://doi.org/10.1016/j.vgie.2017.12.001>
- Tan, S., Zhong, C., Huang, S., Luo, X., Xu, J., Fu, X., Peng, Y., & Tang, X. (2019). Clinical outcomes of lumen-apposing metal stent in the management of benign gastrointestinal strictures: a systematic review and meta-analysis. *Scandinavian journal of gastroenterology*, 54(7), 811–821. <https://doi.org/10.1080/00365521.2019.1638447>