

Gastrointestinal Follicular Lymphoma of the Cecum Treated via Endoscopic Full-Thickness Resection

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ABSTRACT

Gastrointestinal follicular lymphoma (GI-FL) is an uncommon non-Hodgkin lymphoma that affects the gastrointestinal tract. It typically occurs within the duodenum with the appearance of multiple nodules. Treatment options, depending on stage and grade of the tumor, include aggressive chemotherapy, immunotherapy, radiotherapy, surgical or endoscopic resection, or simply monitoring as focal disease may be indolent. We present a rare case of a GI-FL presenting as a solitary lesion within the cecum treated via endoscopic full-thickness resection using the Ovesco full-thickness resection device. This case demonstrates the effectiveness of endoscopic full-thickness resection in treating small GI-FL in the colon.

KEYWORDS: gastrointestinal follicular lymphoma; endoscopic full-thickness resection; full-thickness resection device

INTRODUCTION

Gastrointestinal follicular lymphoma (GI-FL) is a relatively rare form of extranodal non-Hodgkin lymphoma (NHL), estimated to comprise 1%–3.6% of gastrointestinal (GI) NHLs.¹ Most cases present in the duodenum while cases in the large intestine are very rare.^{1,2}

Endoscopic full-thickness resection (EFTR) is an endoscopic resection technique useful in the resection of lesions that are not easily treated via conventional techniques—namely sessile, non-lifting lesions.³ We present the case of a patient with an isolated cecal GI-FL that was treated using EFTR.

CASE REPORT

A 62-year-old woman underwent screening colonoscopy which revealed a sessile polyp in the cecum. Prominent lymphoid nodules were seen histologically upon biopsy, prompting referral for polypectomy. Repeat colonoscopy actually revealed a 12 mm submucosal lesion in the cecum. Endoscopic ultrasound was not performed given the proximal location.

The lesion did not lift with submucosal injection of dilute epinephrine. The overlying mucosa was removed with a cold snare, and forceps biopsies were obtained of the firm lesion, which diagnosed a low-grade follicular lymphoma (FL; Figure 1). The patient was referred to oncology, where a positron emission tomography-computed tomography scan and bone marrow biopsy were performed. Positron emission tomography-computed tomography did not reveal any evidence of malignancy; the cecal lesion was not fluorodeoxyglucose avid. The bone marrow biopsy was normal without evidence of lymphoma.

As this appeared to be an isolated GI-FL, she was referred back to GI for endoscopic management. After discussion with the patient, colonoscopy was repeated, and the lesion was endoscopically resected using the Ovesco full thickness resection device (FTRD) without complication (Figure 2). Final pathology revealed a 23 × 21 × 8 mm grade 1–2 FL with negative margins (Figure 3).

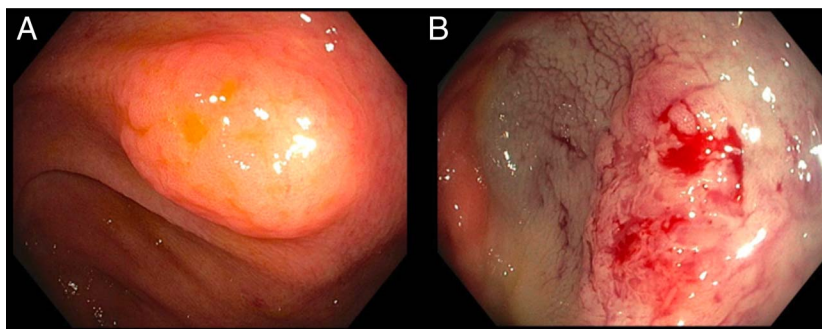


Figure 1. Cecal lesion before (A) and after (B) mucosal stripping and biopsy.

Six months after endoscopic resection, the patient is clinically well and being followed by her local oncologist. A 1-year follow-up colonoscopy is pending, with future examinations per standard colorectal cancer screening/surveillance guidelines.

DISCUSSION

FL is a common form of NHL with an estimated annual incidence of 2.6 cases per 100,000 individuals.⁴ GI-FL is an uncommon subset of FL; while the majority of cases are secondary to other NHL, few develop as primary GI-FL.⁴ Primary GI-FL most commonly involves the periampullary region of the duodenum and less commonly the stomach, jejunum, and ileum.^{4,5} Approximately 1%–2% of cases of primary GI-FL occur within the large intestine.²

Most cases of GI-FL are indolent and found incidentally, though symptoms including abdominal pain, nausea, vomiting, and intestinal bleeding may occur.¹ Its prognosis is excellent, in part, due to its early detection through screening endoscopic procedures.⁶ Dependent on staging and grading, treatment options for GI-FL include various immunotherapeutic (eg, rituximab) and chemotherapeutic (eg, cyclophosphamide, doxorubicin, vincristine, and prednisone) drug regimens, as well as radiotherapy, surgical or endoscopic resection, or even simply monitoring progression (watch-and-wait approach).^{6,7} Metastatic disease is treated with chemotherapy. While cases of low-grade GI-FL presenting as a solitary lesion are rare, endoscopic resection is the recommended treatment for such cases.⁶

Traditional techniques for the endoscopic resection of sessile GI lesions to include endoscopic mucosal resection and endoscopic submucosal dissection are well documented.⁸ However, these techniques are not adept in the resection of lesions deeper than the submucosa or that do not lift with submucosal injection.⁸ EFTR is a relatively new and novel technique that allows for resection of such lesions in the GI tract.⁸

The Ovesco FTRD is a device comprising a 2 cm long cap with an over-the-scope clip and a prelooped polypectomy snare used as an all-in-one option for EFTR.⁸ In FTRD-mediated EFTR, the periphery of the target lesion is marked with cautery. The cap is mounted on the end of the endoscope or colonoscope, and the instrument is advanced to the target lesion. Endoscopic forceps are then passed through the operating channel and used to grasp the non-lifting lesion and pull it into the cap through the open snare. The clip is then deployed to capture the lesion and full thickness of the GI tract wall. The snare is closed, and cutting current is applied to resect the lesion. The clip remains after resection, sealing what would have been a perforation.⁸

EFTR is primarily indicated for the resection of non-lifting adenomas (such as recurrent/persistent adenomas), adenomas in diverticula or other locations at high risk of perforation, subepithelial tumors, and early carcinomas.^{3,9} One review cited colorectal EFTR technical success rates between 83.8% and 94.4%, with accompanying R0 resection rates ranging between 71.8% and 90%.³ The major limitation associated with EFTR is the size of the FTRD cap and, by proxy, the size of the lesion to be resected.¹⁰ There is no clear consensus

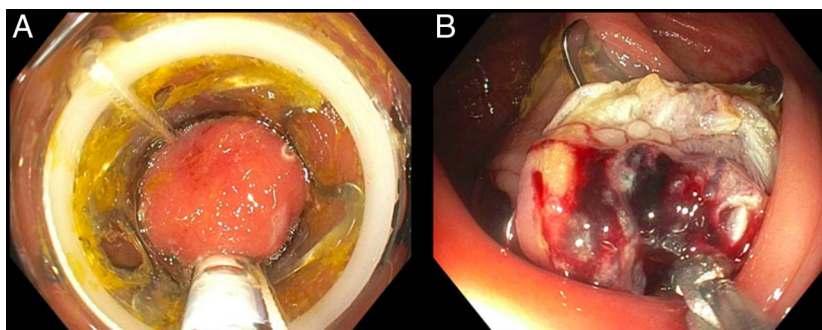


Figure 2. (A) Endoscopic full-thickness resection of the lesion using the Ovesco full-thickness resection device. (B) View of the deployed clip within the cecum following resection.

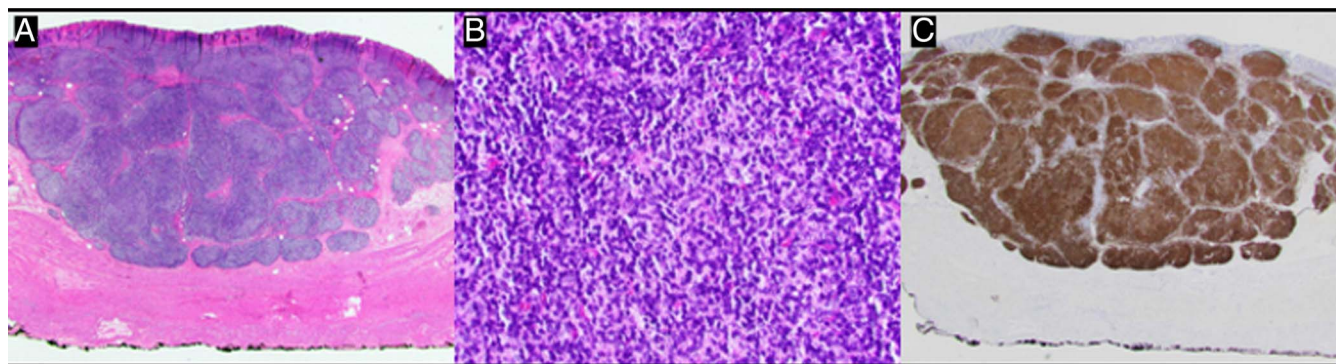


Figure 3. (A and B) Hematoxylin and eosin stain of a section of the lesion at 2× (A) and 40× (B) magnification. (C) Positive immunohistochemical stain of a section of the lesion for CD20 at 2× magnification.

regarding the size of the target lesion to be resected; however, most experts consider the upper limit to be approximately 2 cm.^{3,8–10}

Adverse events (AEs) following EFTR in the lower GI tract include bleeding, perforation, and inflammation/infection, with delayed bleeding being the most common.^{3,9} AE rates range from 5.3% to 14.1%, with severe AEs occurring in 1.3%–4.4% of cases. Approximately 2% of AEs require surgical intervention.³

We present a case of a patient with a rare GI-FL based on it being a solitary lesion in the cecum that was successfully treated with EFTR. The use of EFTR will continue to increase as experience grows and more gastroenterologists are trained in this procedure. EFTR using the Ovesco FTRD appears to be effective for small isolated colonic GI-FL.

DISCLOSURES

Author contributions: A.J. Mauro: drafted the manuscript; collected, analyzed, and interpreted literature data; provided critical revision and final approval of the manuscript. P.D. Bell: provided images and interpretations of these images; provided critical revision and final approval of the manuscript. K. McGrath: drafted the manuscript; provided images and interpretations of these images; provided critical revision and final approval of the manuscript. K. McGrath is the article guarantor.

Financial disclosure: None to report.

Informed consent was obtained for this case report.

Received April 20, 2024; Accepted July 11, 2024

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