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CASE REPORT | INFLAMMATORY BOWEL DISEASE

Adenocarcinoma Within Carpet-Like Pseudopolyposis

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ABSTRACT

Pseudopolyps are benign lesions without malignant potential and typically do not require biopsy or excision. We describe a 68-year-old man with ulcerative colitis found to have multiple large bridging pseudopolyps. Repeated colonoscopies and extensive biopsies revealed a large ulcerated lesion previously hidden within the pseudopolyps. The pathology of the lesion was consistent with a low-grade adenocarcinoma with invasion into the muscularis propria. This demonstrates that large pseudopolyps, although benign, can obscure other lesions with malignant potential. Therefore, in addition to careful inspection, healthcare providers must perform periodic surveillance colonoscopies and offer surgical resection to patients with giant pseudopolyposis.

INTRODUCTION

Pseudopolyps are seen in 10%–20% of patients with ulcerative colitis (UC), commonly in those with moderate to severe inflammation.[1] They are considered benign lesions without increased tendency for neoplastic transformation when compared with normal colonic mucosa.[2] We present a patient with UC with occult adenocarcinoma within carpet-like pseudopolyposis.

CASE REPORT

We present a 68-year-old man who was diagnosed with left-sided UC in 2010 and was treated with oral mesalamine for 6 months, after which he remained asymptomatic without any treatment. He is an ex-smoker, and his medical history includes degenerative disc disease and benign prostatic hyperplasia. He did not have primary sclerosing cholangitis or other extraintestinal manifestations. There was no family history of colon cancer, and the patient has no personal history of dysplasia. He was hospitalized with a UC flare in May 2016. At admission, the C-reactive protein level was elevated at 201.07 mg/L, but fecal calprotectin was not tested. A sigmoidoscopy at the time showed Mayo 3 colitis. He was treated with intravenous corticosteroids with a prednisone taper, followed by Mezavant 4.8 g oral daily. He rapidly went into clinical remission followed by normalization of his C-reactive protein. The fecal calprotectin was normal at 4 weeks postdischarge.

In October 2016, a colonoscopy to assess for mucosal healing showed no active inflammation and multiple large bridging pseudopolyps (carpet-like) in the descending and transverse colon (Figure 1). The pseudopolyps were biopsied extensively, and all biopsies showed normal colonic mucosa. Given the extent of the pseudopolyposis and the technical difficulty of future neoplasia surveillance colonoscopy, management options, including surgical intervention vs periodic surveillance colonoscopy, were discussed with the patient. The patient opted for periodic colonoscopy. The patient was not considered for immunomodulator or biologic therapy at this time because he was in clinical and endoscopic remission.

A repeat colonoscopy was performed in June 2017. Multiple large pseudopolyps were visualized once again in the descending and transverse colon (Figure 2). Ten pseudopolyps were removed via hot snare polypectomy. Pathology of the pseudopolyps in the transverse colon showed polypoid high-grade dysplasia with suspicion for intramucosal carcinoma. Biopsies of the remainder of the colon were normal. A repeat colonoscopy was performed to assess the area of dysplasia: a large ulcerated lesion that had been previously hidden by the extensive polyposis was now visible in the mucosa between the pseudopolyps (Figure 3). Biopsies taken from the lesion confirmed intramucosal carcinoma.

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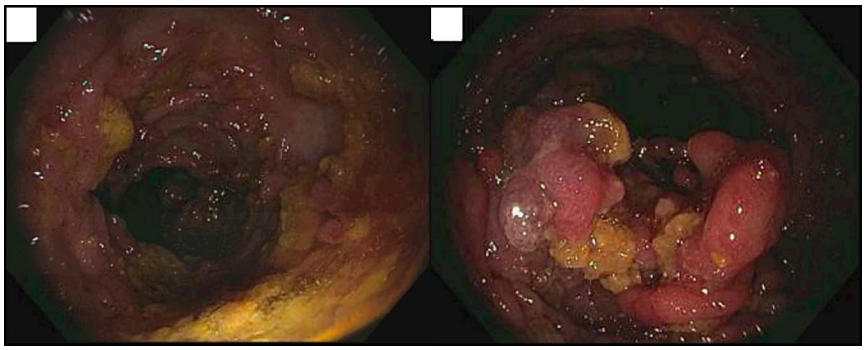

Figure 1. Pseudopolyps in the transverse colon on the first screening colonoscopy in 2016.

A thoracic, abdominal, and pelvic computed tomography showed irregular mural wall thickening of the proximal transverse colon; there was no evidence of metastatic disease. The patient underwent subtotal colectomy with ileosigmoid anastomosis in August 2017. The surgical specimen of the transverse colon contained a $7 \times 3.5 \times 1.3$ cm tumoral mass covered by polyps. The tumor's histology was consistent with low-grade adenocarcinoma with invasion into the muscularis propria. The pathology of the polyps covering the tumor showed chronic inflammatory changes consistent with inflammatory polyps. The remainder of giant pseudopolyps from other segments of the colon demonstrated normal colonic mucosa without any dysplasia. Lymph node pathology was negative for metastasis.

DISCUSSION

Patients with long-standing inflammatory bowel disease have a 2-fold increased risk of colorectal carcinoma (CRC) compared with the general population.[3] Generally, complete endoscopic resection is recommended for polypoid lesions because they carry a potential risk of malignant transformation.[4,5] By contrast, pseudopolyps, also known as inflammatory polyps, are benign polypoid lesions with no potential for malignant transformation.[2] They represent remnants of healthy mucosa surrounded by areas of ulceration and inflammation.[6] Pseudopolyps can be seen in both active and quiescent phases of inflammatory bowel disease and can occur in all segments of the colon with a predilection for the transverse colon.[7] Despite their benign nature, there is conflicting evidence regarding their association with CRC. Multiple case-control studies have found that the presence of pseudopolyps is associated with an increased risk of CRC, whereas a recent large-scale retrospective study showed no increased risk.[8–11]

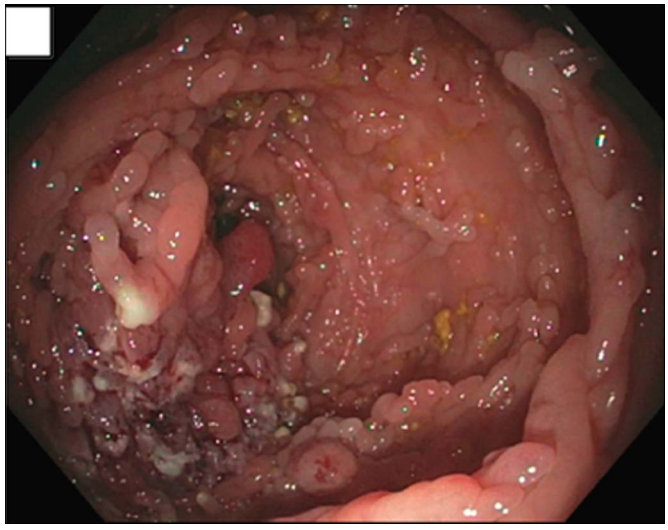

Figure 2. Giant pseudopolyposis in the transverse colon at the second screening colonoscopy in 2017.

Occult dysplasia or carcinoma within pseudopolyps is extremely rare but has been reported. Adenocarcinoma within pseudopolyps was first described in 1949.[12] Pseudopolyps larger than 1.5 cm are considered giant pseudopolyps.[13] The large size of giant pseudopolyps renders the detection of neoplasia more difficult because it can potentially obscure other neoplastic lesions. There are 2 previous reported cases of dysplasia or adenocarcinoma within a giant pseudopolyp.[14,15] Our case represents a third report of giant pseudopolyp complicated by adenocarcinoma.

Biopsy or resection is generally not necessary if the endoscopic appearance of the pseudopolyps firmly establishes the diagnosis and if they are asymptomatic. Current guidelines recommend starting surveillance colonoscopy 8 to 10 years after initial onset of symptoms. Patients with pseudopolyps are classified as moderate risk for CRC, and the guidelines recommend these patients to undergo their next surveillance colonoscopy within 2 to 3 years.[4,5] The aforementioned reported cases of occult malignancy put into question the optimal surveillance method for pseudopolyps, especially when numerous and large. In addition to careful surveillance of the surface, giant pseudopolyps should be biopsied aggressively to ensure no occult carcinoma is missed. Endoscopic resection of polyps can also be considered to allow better visualization of the mucosa. In addition to white light endoscopy, chromoendoscopy has been suggested as a tool to differentiate between benign pseudopolyps and dysplasia based on a polyp's pit pattern.[16] However, as in our case, the large size and number of pseudopolyps in giant pseudopolyposis

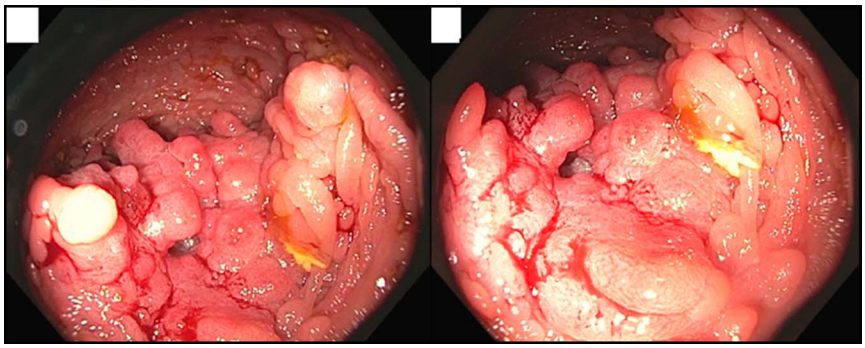

Figure 3. Ulcerated mass within the collection of pseudopolyps.

would continue to make endoscopic evaluation difficult. Repeat endoscopic surveillance with biopsy should be performed in a timely interval. Once dysplasia is identified within pseudopolyps, segmental colectomy should be performed if the lesions cannot be removed entirely via endoscopy. Patients should also be presented with the surgical option of segmental or total colectomy in lieu of endoscopic surveillance, given the difficulty of performing surveillance colonoscopies.

Dysplasia and adenocarcinoma hidden within giant pseudopolyps remain extremely rare events. Given that the reported cases vary in patient age and duration of disease, it is unclear if there are any clinical characteristics that would suggest an increased risk of dysplasia within the pseudopolyps. More research is needed in the future to understand the risk of occult malignancy within pseudopolyps. Attention should be paid to the size of pseudopolyps because the 3 recently reported cases of occult malignancy all occurred within giant pseudopolyps.

DISCLOSURES

Author contributions: Y. Xiao wrote the manuscript, reviewed the literature, and is the article guarantor. PL Lakatos approved the final manuscript. T. Bessissow provided the endoscopic images and approved the final manuscript.

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Informed consent was obtained for this case report.

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REFERENCES

1. Jalan KN, Walker RJ, Sircus W, McManus JP, Prescott RJ, Card WI. Pseudopolyposis in ulcerative colitis. *Lancet.* 1969;2(7620):555–9.
2. Hornick JL, Odze RD. Polyps of the large intestine. In: *Surgical Pathology of the GI Tract, Liver, Biliary Tract, and Pancreas.* 2nd edn. Saunders: Philadelphia, PA, 2009, pp 481–534.
3. Lutgens MWMD, van Oijen MGH, van der Heijden GJMG, Vleggaar FP, Siersema PD, Oldenburg B. Declining risk of colorectal cancer in inflammatory bowel disease: An updated meta-analysis of population-based cohort studies. *Inflamm Bowel Dis.* 2013;19(4):789–99.
4. Annese V, Daperno M, Rutter MD, et al. European evidence based consensus for endoscopy in inflammatory bowel disease. *J Crohns Colitis.* 2013;7(12):982–1018.
5. Cairns SR, Scholefield JH, Steele RJ, et al. Guidelines for colorectal cancer screening and surveillance in moderate and high risk groups (update from 2002). *Gut.* 2010;59(5):666–89.
6. Goldgraber MB. Pseudopolyps in ulcerative colitis. *Dis Colon Rectum.* 1965;8(5):355–63.
7. De Dombal FT, Watts JM, Watkinson G, Goligher JC. Local complications of ulcerative colitis: Stricture, pseudopolyposis, and carcinoma of colon and rectum. *Br Med J.* 1966;1(5501):1442–7.
8. Baars JE, Looman CWN, Steyerberg EW, et al. The risk of inflammatory bowel disease-related colorectal carcinoma is limited: Results from a nationwide nested case-control study. *Am J Gastroenterol.* 2011;106(2):319–28.
9. Rutter MD, Saunders BP, Wilkinson KH, et al. Cancer surveillance in longstanding ulcerative colitis: Endoscopic appearances help predict cancer risk. *Gut.* 2004;53(12):1813–6.
10. Velayos FS, Loftus EV Jr, Jess T, et al. Predictive and protective factors associated with colorectal cancer in ulcerative colitis: A case-control study. *Gastroenterology.* 2006;130(7):1941–9.
11. Mahmoud R, Shah SC, Ten Hove JR, et al. No association between pseudopolyps and colorectal neoplasia in patients with inflammatory bowel diseases. *Gastroenterology.* 2019;156(5):1333–44.e3.
12. Harwood R, Means JH, Ellis DS, Jones CM, Kranes A, Mallory TB. Chronic ulcerative colitis, with pseudopolyposis and adenocarcinoma. *N Engl J Med.* 1949;240(10):388–90.
13. Hinrichs HR, Goldman H. Localized giant pseudopolyps of the colon. *JAMA.* 1968;205(4):248–9.
14. Kusunoki M, Nishigami T, Yanagi H, et al. Occult cancer in localized giant pseudopolyposis. *Am J Gastroenterol.* 1992;87(3):379–81.
15. Wyse J, Lamoureux E, Gordon PH, Bitton A. Occult dysplasia in a localized giant pseudopolyp in Crohn's colitis: A case report. *Can J Gastroenterol.* 2009;23(7):477–8.
16. Kudo S, Tamura S, Nakajima T, Yamano H, Kusaka H, Watanabe H. Diagnosis of colorectal tumorous lesions by magnifying endoscopy. *Gastrointest Endosc.* 1996;44(1):8–14.