CASE REPORT

Ileocecal Valve Lipoma With Refractory Hemorrhage

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ABSTRACT

Background: Lipomas are the most common benign mesenchymal tumors of the gastrointestinal tract, with the colon being the most prevalent site. Intestinal lipomas are usually asymptomatic. Tumors >2 cm in diameter may occasionally cause nonspecific symptoms, including change in bowel habits, abdominal pain, or rectal bleeding, but with resection the prognosis is excellent. Herein, we describe the case of an elderly male who presented with painless hematochezia.

Methods: Both colonoscopy and computed tomography of the abdomen and pelvis confirmed the presence of a mass near the ileocecal valve. Because of continuing bleeding, the patient required laparoscopic-assisted right hemicolectomy to resect the mass.

Results: Both gross and microscopic pathology were consistent with lipoma at the ileocecal valve.

Conclusion: Previous cases of ileocecal valve lipomas have been reported in the English literature, with the majority presenting as intussusception or volvulus. We present a rare case of an ulcerated ileocecal valve lipoma presenting as lower gastrointestinal bleeding that was treated successfully with laparoscopic resection.

Key Words: Lipoma, Ileocecal valve, Rectal bleeding.

INTRODUCTION

Lipomas are the most common benign mesenchymal tumors of the gastrointestinal tract. Distribution of alimentary lipomas demonstrates a predilection for the colon, but they may originate anywhere in the gastrointestinal tract, from the hypopharynx to the rectum. Often asymptomatic and detected incidentally at the time of colonoscopy or surgery, lipomas >2 cm in diameter may occasionally cause nonspecific symptoms, including change in bowel habits, abdominal pain, or rectal bleeding. Diagnosis of gastrointestinal lipomas may involve barium enema, colonoscopy, or computed tomography (CT). Diagnosis is notoriously difficult given that malignant disease cannot be excluded definitively through imaging or biopsy alone. A wide range of operative and nonoperative techniques has been utilized for resection. Few cases of lipoma have been reported to date with origin at the ileocecal valve, the majority of which have presented as intussusception[1–3] or volvulus.[4] We describe a rare case of an ulcerated ileocecal valve lipoma associated with lower gastrointestinal bleeding that was significant enough to require urgent laparoscopic resection.

CASE REPORT

A 77-year-old male with a history of diabetes mellitus, hypertension, coronary artery disease, aortic valve replacement, and coronary artery bypass grafting, who was therapeutic on warfarin, presented to his gastroenterologist with 2 days of painless hematochezia. He denied similar prior episodes of rectal bleeding. Outpatient colonoscopy performed at that time revealed a 6-cm cecal mass with mucosal necrosis at the ileocecal valve, as well as a small ulcer at the hepatic flexure. Given the colonoscopic findings, the patient was transported urgently to our emergency department.

Upon presentation, the patient was in no acute distress with a core temperature of 36.4°C, heart rate of 73 beats/min, blood pressure of 135/91 mm Hg, and respiratory rate of 18 breaths/minute. His abdomen was soft, nontender, and nondistended with no evidence of peritoneal irritation. Computed tomography of the abdomen and pelvis with oral and intravenous contrast revealed a

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1.9-cm x 1.5-cm lesion within the cecum **(Figure 1)**. The patient was admitted for hemodynamic monitoring, transfusion, and surgical resection of the ileocecal mass.

The patient received vitamin K and 2 units of fresh frozen plasma for reversal of the effect of warfarin. Nonetheless, hematochezia continued with a steady decrease in hematocrit from 43% to 39% over a 24-hour period. On hospital day 2, he underwent an uncomplicated laparoscopic-assisted right hemicolectomy and ileo-transverse colostomy. Pathology revealed a 3.5-cm x 2.0-cm x 1.5-cm mass at the ileocecal valve **(Figure 2)**. The yellow, homogeneous cut surfaces and the microscopic evaluation **(Figure 3)** were both consistent with lipoma of the ileocecal valve. The postoperative course was unremarkable. The patient regained bowel function by postoperative day 4 and was discharged the following day.

DISCUSSION

Gastrointestinal lipomas are benign lesions arising from the adipocytes within the intestinal submucosa[5] with the first case reported by Bauer in 1757.[6] With a reported incidence of 0.2% to 4.4%, lipomas are the third most common benign colonic neoplasm following hyperplastic and adenomatous polyps.[7–9] Lipomas are found most commonly in the colon, with the highest frequency found in the ascending colon and cecum followed by the transverse colon, descending colon, sigmoid, and least often the rectum.[10] Despite the propensity for colonic distribution, lipomas can occur anywhere along the alimentary tract, including the hypopharynx, stomach, small bowel, and esophagus.[11,12] When confined to the colon, 90% of these lesions are localized to the submucosa; however, a few reports have suggested an origin in the subserosal plane.[7,10] These tumors are more prevalent in women and are typically discovered during the fifth or sixth decade of life.[13–15]

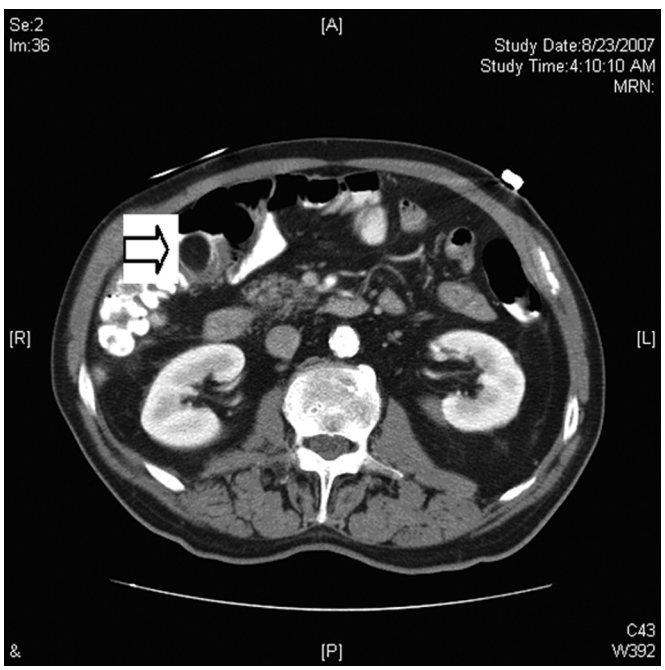

Figure 1. CT image of mass preoperatively, demonstrating a 1.9-cm × 1.5-cm lesion within the cecum (arrow), measuring -80 Hounsfield units, consistent with adipose tissue.

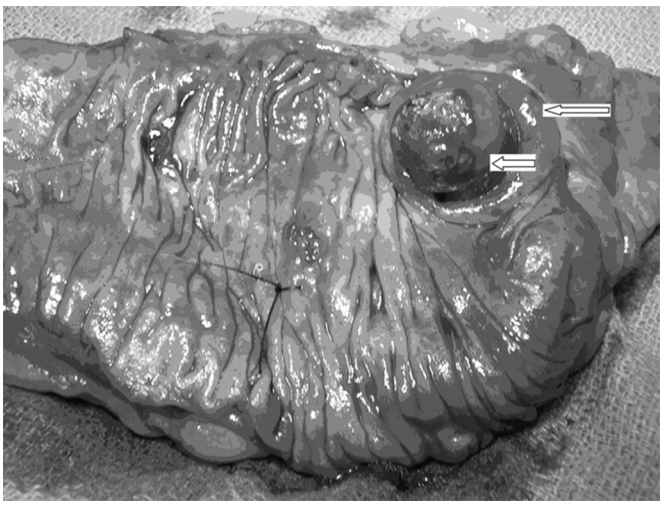

Figure 2. Intraoperative photograph with cecum opened to reveal a 3.5-cm × 2.0-cm × 1.5-cm tumor (bottom arrow) and ileocecal valve (top arrow).

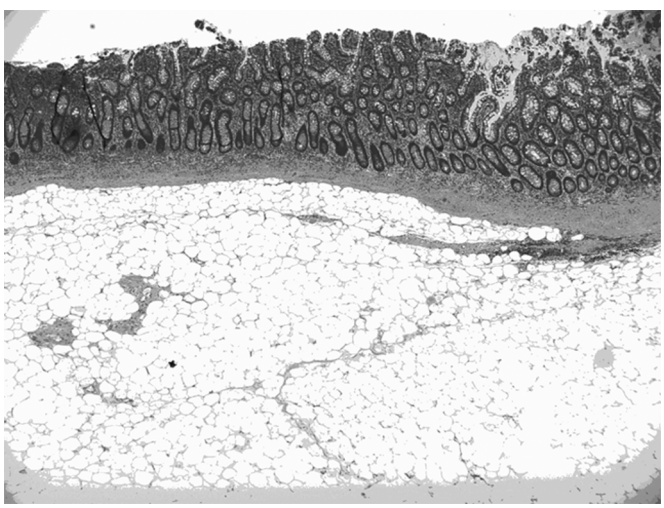

Figure 3. Histopathology of lipoma: Hematoxylin and eosin stain (20× magnification) reveals a circumscribed collection of mature adipocytes.

Lipomas tend to be solitary, spherical, and smooth lesions. They vary in size and can be sessile or pedunculated. Cases of multiple lesions have been reported.[10,16] Lipomas are generally asymptomatic and are identified most commonly as incidental findings during colonoscopy, surgery, or autopsy. In the minority of patients who do present with symptoms, the lesions tend to be >2 cm in diameter, as in the present case. Common symptoms include constipation, diarrhea, colicky abdominal pain, or lower gastrointestinal bleeding.[7,17,18] Abdominal pain may be associated with intermittent intussusception, whereas gastrointestinal bleeding is secondary to ulceration of the overlying mucosa.[16] In rare cases, patients can present with dramatic clinical symptomatology that requires urgent operative intervention,[4] usually for intussusception or acute hemorrhage.[6] Our patient presented with hematochezia likely secondary to the combination of the size, mucosal necrosis at the surface of the lipoma, and the patient's anticoagulation regimen.

A variety of imaging modalities are available to assist in the preoperative diagnosis of gastrointestinal lipoma. Barium enema shows colonic lipomas as ovoid, well-delineated, and smooth radiolucent masses.[10] A "squeeze sign" can also be noted, which indicates a change in size and shape of the lesion due to peristalsis.[19] Unfortunately, barium enema does not yield a definitive diagnosis. Computed tomography scanning is a second modality that provides a more definitive diagnosis in uncomplicated cases, where lipomas appear as sharply demarcated ovoid lesions with absorption densities of -40 to -120 Hounsfield units.[20,21] In the present case, CT demonstrated a cecal mass and provided a likely diagnosis. Lastly, endoscopy is a third diagnostic tool with 2 typical findings: "Tenting" is described when the mucosa overlying the lipoma is easily retracted away from the mass with biopsy forceps, and a "cushion sign" is present when the forceps produces a soft, cushioning indentation when applied to the lipoma.[22] Due to the submucosal location of these lipomas, superficial colonoscopic biopsies are often nondiagnostic.[23] Rarely, colonoscopy can reveal ulcerations and a lack of the "cushion sign," which may lead to the impression of malignant disease as in the case of our patient. Katsinelos et al[24] described 11 lesions that demonstrated malignant features on colonoscopy but were proved ultimately to be benign lipomas on histopathology examination.

Preoperative diagnosis of gastrointestinal lipomas can be difficult when it presents as signs and symptoms suggesting malignant disease that cannot be excluded definitively through imaging or biopsy alone. The greatest clinical importance of intestinal lipoma is its potential to be confused with malignant colonic neoplasm.[16,17] Therefore, histopathologic evaluation is the gold standard diagnosis. Immediate surgical intervention is mandatory in cases of obstruction, intussusception, perforation, or massive hemorrhage[16] with the last sign being seen in our patient.

Several operative and nonoperative techniques have been described, including laparotomy, mini-laparotomy, and laparoscopy to perform enucleation, colostomy, excision, or segmental colonic resection of lipomas.[25–27] Among the nonoperative techniques, endoscopic removal of symptomatic lipomas is controversial due to the inefficient conduction of electric current through adipose tissue. This inefficiency results in an unacceptably high rate of complications, including perforation or hemorrhage.[25,28]

Previous case reports have demonstrated that ileocecal valve lipomas present most commonly as intussusception[1–3] or volvulus.[4] Only one of these earlier cases was managed by laparoscopic resection.[1] To our knowledge, laparoscopic resection has not been utilized in the setting of acute hemorrhage secondary to an ileocecal valve lipoma. However, given that lipomas disbursed throughout other regions of the large intestine have been resected successfully through laparoscopy,[27,29] laparoscopic resection may now be considered an excellent, minimally invasive option for the treatment of ileocecal valve lipomas presenting as intussusception, volvulus, or hemorrhage.

CONCLUSION

We present a case of ileocecal valve lipoma in a patient who presented with acute gastrointestinal hemorrhage. Colonoscopy revealed a necrotic mass in the proximal ascending colon. The patient required urgent laparoscopic-assisted right hemicolectomy to control bleeding. After an extensive literature review, it was found that the majority of intestinal lipomas present as colonic lipomas with either intussusceptive or obstructive symptoms. We believe this is a very rare case of an ileocecal valve lipoma presenting as ulcerations and necrosis leading to acute hemorrhage and urgent resection.

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