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Case Report

Surgical Resection of a Large Prolapsed Sigmoid Colon Polyp with Colonoscopic Assistance

Okoli, Fidelis, M.D.[1]; Golfeyz, Shmuel, M.D.[2]; Albert, Joel, M.D.[2]; Mayer, Ira, M.D., FACP, FACG, AGAF, NYSGEF.[2]

1. Division of Gastroenterology, Hepatology and Nutrition, Department of Internal Medicine, New York University Langone Hospital, Long Island, New York.

2. Division of Gastroenterology and Hepatology, Maimonides Medical Center, Brooklyn, New York.

*Correspondence to: Okoli, Fidelis, M.D, Email Address: okoli.fidel@gmail.com

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Abstract

Although colorectal lipomas are the second most common benign tumors in the colon, they are uncommonly seen in clinical practice. Lipomas are typically asymptomatic and incidentally found during colonoscopy or on radiological imaging. Symptomatic lipomas are usually larger than two centimeters and can present with abdominal pain, change in bowel habits, obstruction, bleeding, intussusception, or perforation. Different imaging modalities can be used to diagnose lipomas however definitive diagnosis is made histologically. Symptomatic lipomas require either endoscopic or surgical resection. We report a case of a colonoscopy-assisted resection of a large sigmoid colonic lipoma that prolapsed through the anal canal.

Key Words: *Colorectal lipomas, Colonoscopy assisted resection, Rectal prolapse, Gastrointestinal lipomas, Abdominal pain.*

Introduction

Lipomas are benign intramucosal tumors which lack malignant potential. Gastrointestinal (GI) lipomas were first described by Bauer in 1757 and can occur anywhere from the hypopharynx to the rectum 1. Approximately 65-75% are found in the colon, and 20-25% are in the small intestine 2. Lipomas constitute about 5% of all GI tumors with incidence ranging from 0.035% to 4.4% 1,3. The most frequent to least frequent site of colorectal lipomas is the ascending colon and rectum respectively 1. Over 90% of colonic lipomas are asymptomatic and incidentally detected during colonoscopy, imaging studies, surgery, or autopsy 4,5. Large lipomas (i.e. >2cm) are usually symptomatic and can cause complications such as obstruction, bleeding, intussusception, infarction, or perforation 1,6,7. We report a case of a sigmoid lipoma prolapsing through the rectum, which was resected with the assistance of colonoscopy to help guide placement of endoloops.

Figure A showing the 7x5 cm lipoma with coloanal intussusception.

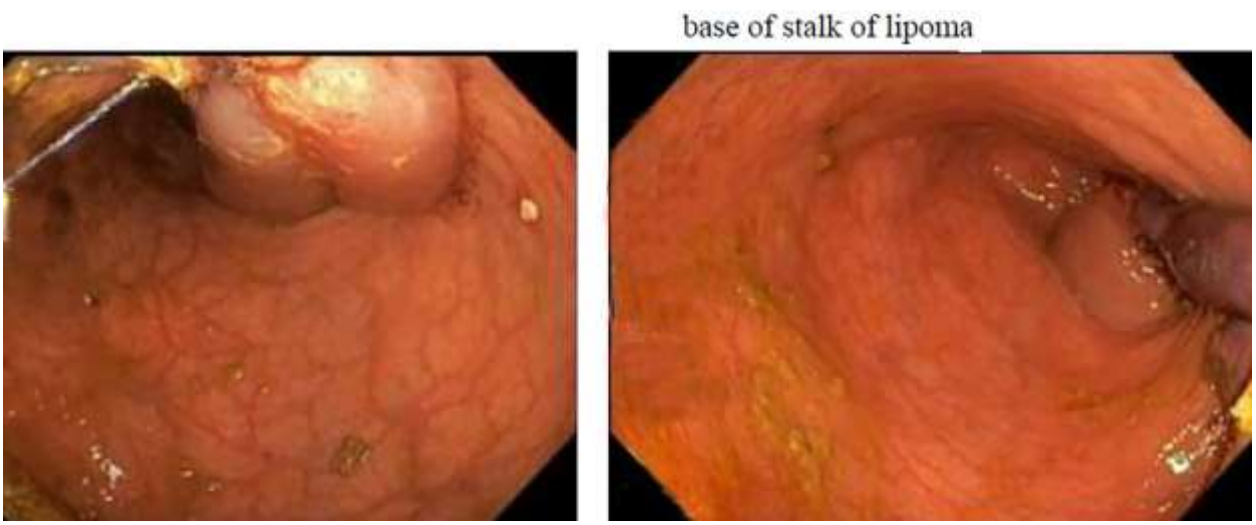

Figure B showing the lipomal stalk base

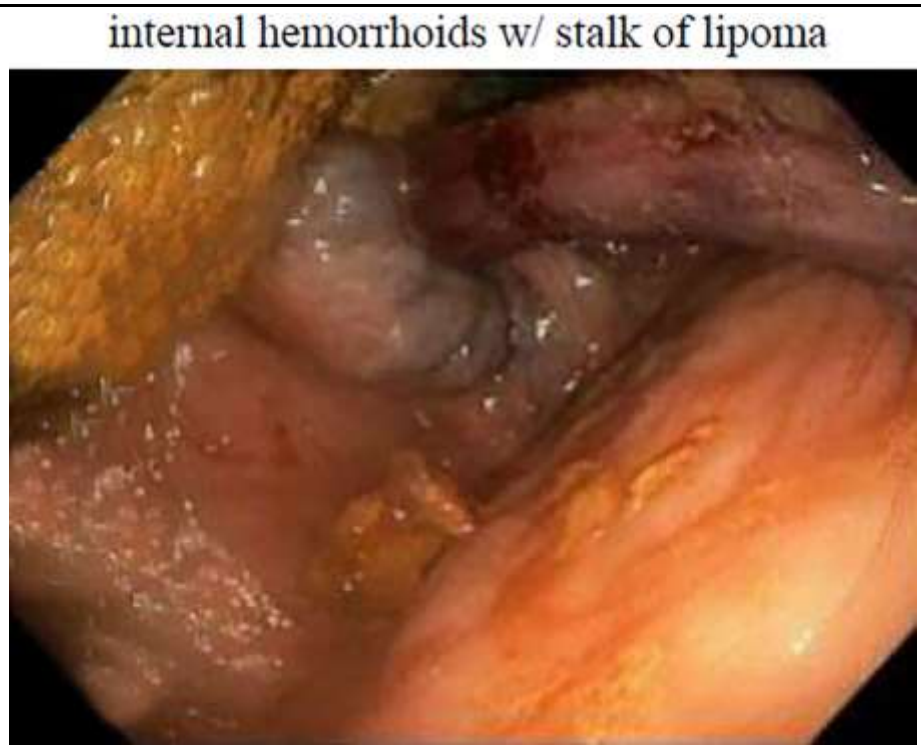

Figure C showing the large stalk of the lipoma and also internal hemorrhoids.

Figure D showing the resected lipoma.

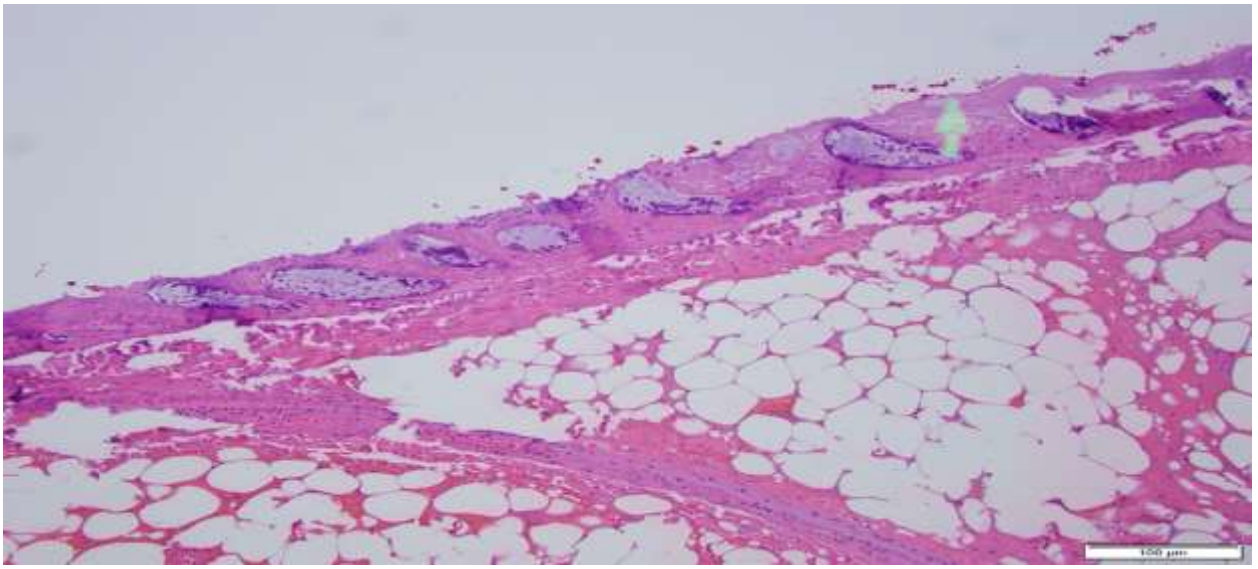

Figure E showing mature lipocytes, acute inflammation and partial fat necrosis as well as overlying colonic mucosa with ulceration as shown by the arrows. Magnification x 40.

Case Report

An 81-year-old man with history of coronary artery disease on Plavix presented with a large mass protruding from his anus. The patient was straining during defecation and felt severe abdominal and rectal pain. Vital signs and labs were normal. Physical examination revealed left lower quadrant tenderness, and a large mass protruding through his anus. Computed tomography (CT) scan of the abdomen and pelvis revealed a prolapsed 7x5cm sigmoid lipoma with coloanal intussusception, without evidence of obstruction, perforation, or peritonitis (figure A). Attempts to reduce the lipoma manually at bedside were unsuccessful, therefore the patient was taken for emergent resection. The gastrointestinal team was asked to assist so that direct visualization could be used to resect the lipoma stalk. A pediatric colonoscope was inserted alongside the lipoma into the rectum revealing a large stalk of prolapsed colon extending to 20cm from the anal verge (figure B). The retroflexion view showed the stalk traversing the anus surrounded by large hemorrhoids (figure C). The colonoscope could not be advanced past the stalk due to intussusception from the lipoma stalk pulling the colon forwards. Endoloops and a LigaSure device were used to transect the lipoma since the patient was on Plavix and had a high bleeding risk. Using the colonoscope for constant visualization, two Endoloops were placed manually to 10cm from the anal verge using caution to avoid anchoring onto

the colonic wall. A third Endoloop was placed at the junction of the lipoma and its stalk at the anal verge. The colonoscope was removed and an Impact LigaSure device was used to slowly transect across the apex of the lesion right at the anal verge with manual pressure to retract the skin, perianal region, rectal mucosa, and hemorrhoids from the LigaSure device (figure D). The colonoscope was then reinserted and the colon was easily traversed up to 40 cm from the anal verge. The stalk was noted to have the two Endoloops in place without bleeding. Pathology revealed a submucosal lipoma with acute inflammation and partial fat necrosis as well as overlying colonic mucosa with ulceration (figure E).

Discussion

Colonic lipomas typically affect people between 50-65 years of age and have a female predominance of 2:1 4. Lipomas arise from the connective tissues of the intestinal wall and about 90% are submucosal. Lipomas can also be subserosal, intramuscular, or mixed 7. The exact etiology is unclear but it is generally accepted that chronic inflammation, abnormal motility, and excessive adipose tissue deposition all play a role in lipoma formation 7,8. Sizes range from a few millimeters to many centimeters 1,9. Lipomas are mostly found in the ascending colon (61%), followed by descending colon (20.1%), transverse colon (15.4%), and rectum (3.4%) 4,10.

Symptomatic lipomas can present with rectal bleeding (54.5%), abdominal pain (42.4%) and change in bowel habits (24.2%) 4,10. Lipomas can also present with constipation, anemia, intussusception, obstruction or perforation 1,6,7,11-13. Spontaneous expulsion of lipomas has been documented in the literature 11,14. This is thought to be due to self-amputation of the lipoma at the stalk and typically seen with giant pedunculated lipomas15,16.

Diagnosis can be made with colonoscopy, barium radiographs, endoscopic ultrasound (EUS), confocal laser microscopy (CLE), or CT scan. Colonic lipomas appear as yellowish smooth submucosal lesions on colonoscopy. Characteristic features include, “cushion or pillow sign” which is a flattening/indentation of the tissue when pushing the biopsy forceps against the lipoma and restoration of its regular shape once the forceps are removed; “naked fat sign” which is when fatty tissues extrudes through the biopsy site; and “tent-sign” which is when the mucosa is grasped with forceps and pulled upwards creating a tent shape 7. Limitations of colonoscopy include reduced sensitivity for diagnosing atypical lipomas with necrosis or ulceration 7. Additionally, biopsies obtained during colonoscopy may fail to obtain adequate adipose tissue

needed to make the diagnosis 4. CT scan is currently the imaging study of choice. Lipomas appear as well defined, ovoid, intramural lesions with a greasy density. CT is specifically useful when lipomas are > 2cm and in those with associated complications such as intussusception, necrosis or infarction 4,6,7,10,17. Barium radiography is sensitive but not specific, and EUS is useful for diagnosing atypical appearing lipomas 7,10,17.

The gold standard for diagnosis is histopathology. Microscopically, lipomas appear as adipose tissue covered by a fibrous capsule, and the overlying mucosa may have ulceration, granulation, or fat necrosis 4,6,7. In our case, the diagnosis was made with CT scan and confirmed by histology.

Asymptomatic colonic lipomas can be observed whereas symptomatic ones require treatment. Lipomas can be managed with either endoscopic or surgical resection. Treatment options depend on size, location, and the presence or absence of complications. Endoscopic excision with snare electrocautery is considered the gold standard for lipomas < 2cm while segmental colectomy with lipectomy is considered the gold standard for uncomplicated lipomas > 2cm 4,5,7,17.

In general, surgical intervention is the more effective treatment option for large colonic lipomas and once removed, they generally do not recur. Endoscopic assistance may be helpful, as in our case, to allow safe resection of the tumor, while minimizing the effects of full surgical resection in patients who may not tolerate such procedures.

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