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Case report

A large lipoma of the descending colon: A rare case report ☆,☆☆

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ARTICLE INFO

Article history:

Received 3 August 2021

Revised 5 August 2021

Accepted 6 August 2021

Available online 1 September 2021

Keywords:

Colon

Lipoma

CT scan

Colonoscopy

ABSTRACT

Colon lipoma is a rare benign disease in the gastrointestinal tract with an incidence rate of approximately 0.035%–4.4%. The disease is often asymptomatic, so it is frequently discovered incidentally through endoscopy, computed tomography, or autopsy. When the tumor is over 2 cm in size, symptoms such as abdominal pain, bowel disorders, and bowel obstruction are common. Surgery is considered the mainstay of treatment for colonic lipomas. Furthermore, surgical (rather than endoscopic) resection is preferred for lipomas >2 cm to avoid complications such as bleeding and perforation. We report on a 61-year-old female patient who was diagnosed with a 4-cm descending colonic fat tumor detected by endoscopy and computed tomography and confirmed by pathology.

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Introduction

Colonic lipoma is a rare disease of the gastrointestinal tract; it belongs to the group of benign non-epithelial neoplasms with a prevalence of 0.035% to 4.4% [1,2]. Colonic lipoma was first described by Bauer in 1757 [2–4]. Because most colonic lipoma cases are asymptomatic, colonic lipoma is primarily discov-

ered incidentally through colonoscopy, abdominal computed tomography (CT), surgery, or autopsy [1]. Clinical symptoms depend on the size of the tumor; when the tumor is more than 2 cm, it usually causes symptoms such as abdominal pain, bloody stools, alteration in bowel habits, diarrhea, and constipation [4,5]. In addition, large tumors can lead to intussusception or intestinal obstruction [4,6]. Surgery is recommended for colonic lipoma cases with tumors larger than 2 cm and/or

☆ Acknowledgments: Self-financed.

☆☆ Competing Interests: The authors do not report any conflicts of interest.

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<https://doi.org/10.1016/j.radcr.2021.08.013>

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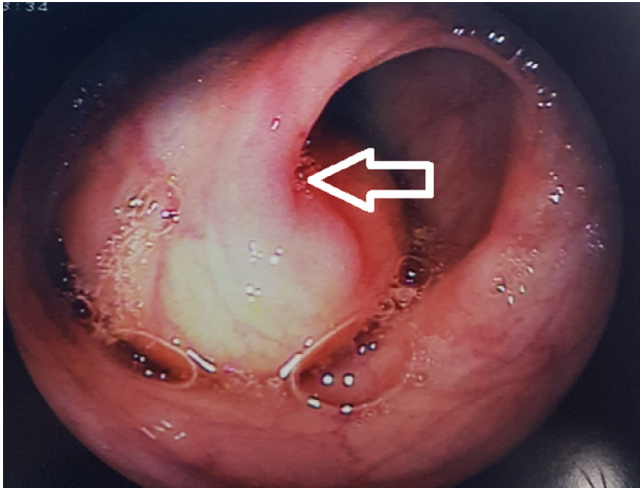


Fig. 1 – Tumor (arrow) image on colonoscopy (The tumor surface was completely smooth, without ulceration).

those that are clinically symptomatic [7]. Surgical, rather than endoscopic, resection is preferred for lipomas >2 cm to avoid complications such as bleeding and perforation [7].

Case report

The patient is a 61-year-old female with normal medical history, no previous laparotomy, and no family's factors related to colon cancer. The patient has not undergone prior screening colonoscopy. About 10 days before admission, the patient occasionally presented with abdominal pain in the left half of the abdomen, which was characterized by intermittent pain lasting about 10 minutes. The patient did not vomit, still had normal bowel movements, and there was no blood in the stool. The patient underwent a colonoscopy, and a submucosal lipoma of the descending colon was found; the tumor surface was smooth and had no ulceration or bleeding (Fig. 1). A CT scan found that the lesion was a spherical tumor, -98 Hounsfield units, with clear boundaries and no signs of invasion into surrounding tissues (Fig. 2). Blood formula and blood chemistry tests were normal. CEA was within normal thresholds. The patient underwent laparoscopic colon wedge resection. The intraoperative lesion was a 2.5 cm x 4.0 cm polypoid tumor with a long stalk located in the descending colon; it was light yellow in color with a smooth surface and soft density (Fig. 3). Pathological results after surgery for submucosal lipoma (Fig. 4). The patient was discharged from the hospital five days after surgery.

Discussion

Colonic lipomas are a rare disease of the gastrointestinal tract, and they are classified as a non-epithelial benign tumor [3]. The incidence of colonic lipomas is very rare, only 0.035%–4.4% [1,2,8]. The etiology of colonic lipomas is currently

unclear. It has been hypothesized that chronic intestinal irritation, inflammatory response, and fat tissue accumulation may be responsible for the formation of colonic lipomas [9]. The most common site of colonic lipomas is in the ascending colon [3,4,7,9]. In addition, colonic lipomas can also be seen in other locations of the colon such as the sigmoid colon (30.3%), descending colon (15.2%), and transverse colon (9.1%) [4]. Most cases of colonic lipoma are single tumor; only 10%–20% of patients have multiple tumors [7]. The most common age ranges from 50 to 70 years, and they are more common in women than in men [7]. The average size of the tumor is 5.09 cm (0.3 cm–10 cm); only 30% of the tumors are >2 cm in diameter [7,8].

Colonic lipomas are often small and asymptomatic, so they are often discovered incidentally through colonoscopy, CT, surgery, or autopsy [1,4]. Clinical symptoms depend on tumor size; tumors >2 cm in diameter is less likely to be symptomatic [7,10]. The most common symptoms are abdominal pain, blood in stools, and alteration in bowel habits [1]. Rectal bleeding due to ulceration and necrosis of the mucosal lining of the tumor occurs in about 30% of cases [11]. Giant tumors can lead to bowel obstruction or intussusception [4]. Complications of intussusception due to colonic lipomas are very rare in adults, accounting for only 1%–5% of bowel obstruction cases [5]. In 2014, Crocetti et al. [9] reviewed 88 articles covering 184 patients diagnosed with colonic larger lipoma, in which 127 patients were selected for inclusion in the subgroup analysis: 27 patients (21%) were asymptomatic, whereas 100 patients (79%) were symptomatic. Symptoms at presentation consisted of abdominal pain in 51 cases (51%), rectal bleeding in 46 cases (46%), alteration in bowel habits in 29 cases (29%), colocolic intussusception in 25 cases (25%), weight loss in 5 cases (5%), and volvulus of the sigmoid colon in 1 case (1%) [9].

Preoperative diagnosis of colonic lipoma is still a challenge [12]. Preoperative diagnosis plays an important role in treatment planning; however, only about 6% of colonic lipoma cases are symptomatic [3]. In addition, clinical symptoms are diverse and nonspecific, making it difficult to distinguish from malignant lesions. Therefore, colonic lipomas are mostly found incidentally during colonoscopy or a CT scan. Colonic lipoma is recognized easily as a well-delineated, soft, round or ovoid, yellowish sessile or pedunculated mass. Although the mucosa overlying the lipoma is usually intact, in some cases, ulcerations and erythema are found on the mucosa, which suggests a malignant lesion [7]. Because of the lipomas' location in the submucosa, three endoscopic signs may contribute to the diagnosis: the “cushion sign” (probing the polyp with closed biopsy forceps will often yield a pillow-like indentation), the “tenting effect” (grasping the overlying mucosa with biopsy forceps presents a tent-like appearance), and the “naked fat sign” (biopsies may result in an extrusion of yellowish fat) [7,9]. Biopsy is not recommended in cases of suspected lipoma because the lesion lies under the normal mucosa. Biopsy also does not support the diagnosis but instead increases the risk of colonic bleeding and perforation [8]. Endoscopic ultrasound can be used to distinguish colonic lipoma from other lesions such as myoma or schwannoma tumors. In addition, endoscopic ultrasound is also used to determine, before endoscopic resection, whether the tumor has invaded the serosa [7]. In contrast-enhanced abdominal CT scan, colonic

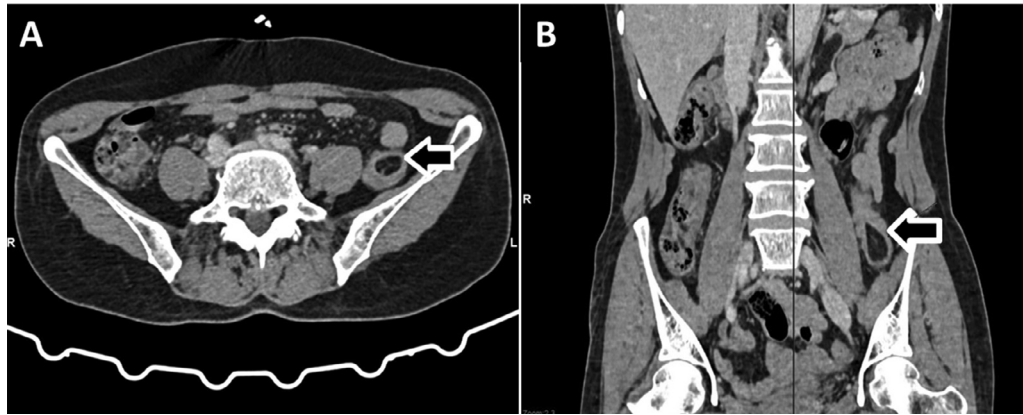


Fig. 2 – Images of a lipoma (arrow) of the descending colon on a computed tomography scan: (A) Axial plane and (B) Coronal plane.

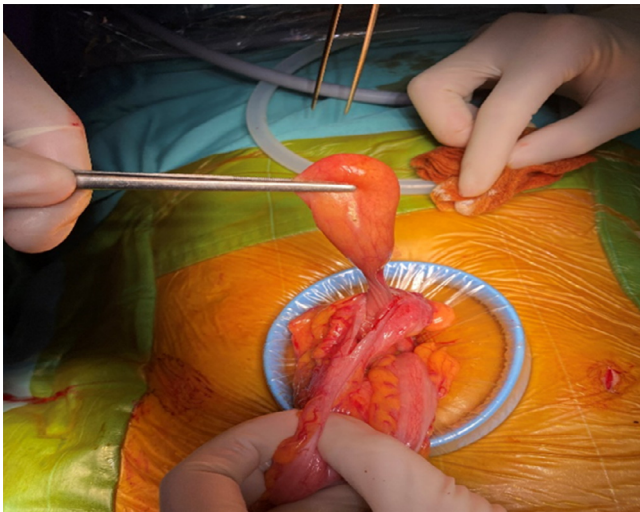


Fig. 3 – Surgical image of colonic lipoma.

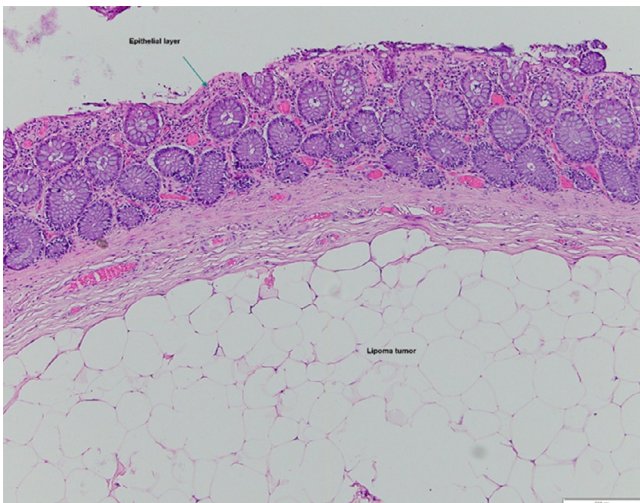


Fig. 4 – Histopathological image of tumor.

lipoma has a uniform appearance with a smooth border and fatty densitometric values between 80 and 120 Hounsfield units. This characteristic of the tumor can help differentiate a benign colonic lipoma from other diseases [3]. However, in the case of small colonic lipoma, the diagnostic value of CT is low [8]. In addition, magnetic resonance imaging can also detect lipomas with adipose-specific signal intensity on T1 [7,8].

Regarding treatment, colonic lipomas are benign tumors that usually develop from the submucosa layer (90%); though they can also invade the muscle layer (10%), the invasion of surrounding tissues is extremely rare [9,12,13]. Asymptomatic small tumors that are less than 2 cm in diameter can be left alone and followed up with later. However, symptomatic or asymptomatic tumors that are >2 cm in diameter can be resected endoscopically or surgically [7]. Endoscopic resection is usually indicated for tumors that are less than 2 cm in diameter or have a peduncle [7,8]. Colonic lipomas that are >2 cm in diameter be removed by colonoscopy; the risk of colonic perforation and bleeding is high [7,8]. For colonic submucosal lipomas that are >4 cm in diameter, surgery is the first priority [7]. Surgery is a reasonable option for large tumors. When the risk of malignancy has not been completely ruled out, colectomy is recommended to remove the tumor [13]. Cancerous colonic lipoma and recurrence after surgery have not been reported on so far [8].

Conclusion

Colonic lipomas are an uncommon benign disease, usually a singular tumor. Clinical symptoms depend on tumor size and are nonspecific. Preoperative diagnosis of submucosal lipoma is still a challenge and is often confused with adenoma or carcinoma. Surgery is the optimal treatment for large or symptomatic lipomas. The choice of surgical method depends on the size, location, and complications of the tumor.

Ethical statement

Appropriate written informed consent was obtained for the publication of this case report and accompanying images.

Author contributions

Ho HA, Do DC, and Nguyen MD contributed equally to this article as co-first authors. All authors have read the manuscript and agree to the contents.

Patient consent

Informed consent for patient information to be published in this article was obtained.

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