



CT Imaging of Colonic Lipomas: Case Report and Literature Review

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Abstract

Although gastrointestinal lipomas are a rare finding on radiologic examinations, their frequency is high enough to suggest taking them into account when making a differential diagnosis for mass lesions of the bowel. Their morphology, peculiar density on CT and intensity on MRI scans, frequently allow to suspect the presence of a lipoma.

Literature Review

Gastrointestinal lipomas are rare, slow-growing, fatty tumors that can develop anywhere in the gut. They may be several, although typically being single [1]. With a little female preponderance at 66.7%, the peak incidence occurs during the fifth and seventh decades of life [2]. Adipose tissue that has undergone significant differentiation makes up the tumor, which is encased in a fibrous capsule. The sliced surface is yellow and lobulated, and subcutaneous fat is visibly present. The submucosal layer is where 90% to 95% of lipomas are found; the remaining 5% to 10% are subserosal [3]. The tumor typically forms an intraluminal polyp on a pseudopedicle because of its typical location, immediately superficial to the muscularis propria, drawing the tumor into the intestinal lumen. Lipomas are frequently discovered by chance during a test performed for another purpose. The clinical symptoms and signs are caused by the size, location, and movement provided by the pseudopedicle, if it is present. Abdominal pain, intussusception, diarrhea, constipation, or gastrointestinal bleeding may result from lesions larger than 2 cm. Anemia can result from the persistent blood loss in the gastrointestinal tract. However, acute bleeding can happen and is typically brought on by the overlaying mucosa becoming ulcerated or sometimes even by intussusception. With 65-75% of lipomas occurring in it, the colon is the part of the gut that is most frequently affected [4]. Lipomas are actually the second-most frequent benign tumor of the colon, trailing only the adenomatous polyp in frequency and by far: despite this, colonic lipomas are rather rare, with a reported incidence less than 5%

[5]. Less than 30 cases have been reported in literature up until now, with lipomas no larger than 8 cm in diameter; symptomatic lipomas tend to be bigger than 2 cm in diameter [6]. The cecum and the right side of the colon are the most affected portions (45%), followed by the sigmoid colon [7]. It is important to distinguish between the actual lipoma of the ileocecal valve and the more common lipomatosis of the valve. Instead of the diffuse growth seen with fatty infiltration, a well-defined mass emerges from the valve in the first scenario, where the fat is encapsulated [8,9]. The majority of colonic lipomas are solitary, but they can occasionally be numerous [10]. Colonic lipomatosis is a rare disorder in which there are several tiny fatty deposits [11].

CT Features

A homogenous mass with Hounsfield units between -80 and -120 on a CT scan is almost always indicative of a lipoma [12,13,15]. Non fatty components are almost never present in lipomas [14]. However, two cases documented gastric lipomas with concomitant ulceration and linear strands of soft-tissue attenuation at the base of the lipomas. On pathologic assessment, the septa or strands were caused by ulcer-related inflammation. Lipomas frequently occur with intussusception of the colon and small intestine. The lipomas' low attenuation may typically be seen on CT scans, however a series of 10 colonic intussusceptible lipomas revealed that nine of them had some loss of fat density and one had totally soft-tissue attenuation [15]. In some situations, the colonic tumor may well resemble a cancer. The typical CT characteristics may not be seen in small intestinal lipomas with a complex intussusception.

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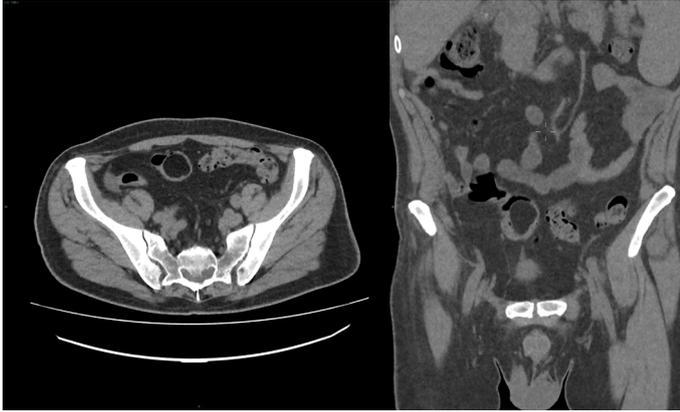


Figure 1. An endoluminal, ovoid, homogeneously and intensely hypodense mass was noted in the sigmoid colon.



Figure 2. Mean density of the lesion is -110 HU..



Figure 3. Maximum diameter of the lesion is 4.5 cm.



Figure 4. A thin peduncle between lesion and bowel wall is noted (arrow).

Case report

A 58-year old man with abdominal pain in the RUQ, jaundice and intermittent diarrhea was admitted in our Surgical Ward via our A&E and was scheduled for a routine CT scan of the abdomen, after an emergency ultrasound examination confirmed the presence of cholecystitis, to complete the diagnostic process. An endoluminal, ovoid, homogeneously and intensely hypodense mass (Figure 1) was noted in the sigmoid colon (-110 HU, 4.5 cm - Figures 2 & 3) and even though completely surrounded by fecal matter, a lipomatous, pedunculated lesion was immediately suspected (Figure 4). Endoscopy was subsequently performed and, in the presence of a true stalk, the lesion was removed, sent to the Pathology Department and a diagnosis of colonic lipoma confirmed. This case clearly confirmed the fact that the diagnosis of colonic lipoma is basically incidental, even though a potential correlation between the intermittent diarrhea and the presence of the lipoma cannot be excluded. Moreover, this pedunculated lipoma was located in the sigmoid, a portion of the colon that tends to have a small diameter than the right colon, therefore more prone to obstruction.

Conclusion

Lipoma of the colon, are rare non-epithelial benign tumors of the gastrointestinal tract. The incidence of colonic lipoma varies from 0.035 to 4.4%, according to autopsy reports. Colonic lipomas are typically found incidentally during colonoscopy, surgery, and autopsy because they typically don't produce symptoms. However, a small percentage of lipomas, particularly those with a diameter more than 2 cm [1,3,5], can produce symptoms when the lesion is big. Up until now, there has never been a report of a colonic lipoma with a maximum diameter bigger than 8.5 cm.

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