CASE REPORT

Caecum lipoma: a rare cause of lower gastrointestinal bleeding

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SUMMARY

Gastrointestinal bleeding caused by benign tumours of the colon is rare. A 70-year-old woman with a significant medical history of diabetes, hypertension and ischaemic heart disease was presented in consultation with marked anaemia secondary to lower gastrointestinal bleeding with a right colonic tumour found by CT. The patient underwent a right colectomy without complications. Histopathological examination revealed a 4 cm transmural caecum lipoma with mucosal ulceration. The patient is asymptomatic without anaemia at 6 months follow-up.

BACKGROUND

Gastrointestinal lipomas are benign infrequent tumours found throughout the gastrointestinal tract, mostly located in the colon. Colonic lipomas have a reported incidence of 0.2–4% of all colonic disease entities and constitute less than 5% of the benign tumours of the colon. They are usually asymptomatic and may be found as incidental findings during colonoscopy examinations or surgery. Large tumours may have vague symptoms such as abdominal pain, change in bowel habits and they rarely present as obstruction, perforation or severe gastrointestinal bleeding.¹ We present an uncommon benign tumour of the colon (a caecum lipoma) in a rare form (severe anaemia due to lower gastrointestinal haemorrhage).

CASE PRESENTATION

A 70-year-old woman was referred to our department because of three episodes of bright red blood per rectum during a 2 week course with no other symptoms. Her history is significant for a 20-year history of diabetes mellitus and she is currently on insulin treatment. The patient has ischaemic heart disease treated with isosorbide due to hypertension treated with losartan and nifedipine. Vital signs: heart rate 86×', blood pressure 140/90 mm Hg, respiratory rate 16×' weight 62 kg, height 160 cm. Physical examination shows a well-oriented pale woman with normal cardiovascular function. There was no palpable mass on abdominal examination. Rectal examination showed haematochezia; it was negative for haemorrhoids and fissures and no palpable rectal tumours were documented. The rest of the physical examination was unremarkable.

INVESTIGATIONS

Initial blood workup showed a complete blood count with haemoglobin 7.2 g/dL, haematocrit

21.8%, platelet count 226×10^3 and white cell count 9.17×10^3 . Serum chemistry showed glucose 157 mg/dL, blood urea nitrogen 19 mg/dL and creatinine 1.3 mg/dL. Liver function test results were as follows: aspartate aminotransferase 14 IU/L, alanine transaminase 15 IU/L, alkaline phosphatase 107 IU/L, total bilirubin 0.33 mg/dL, direct bilirubin 0.11 mg/dL, serum albumin 3.8 mg/dL. Prothrombin time was 11.9 s, and thromboplastin time was 23.7 s. Tumour markers were Ca 12 511.51 ng/mL, Ca 19 9.5 ng/mL and carcinoembryonic antigen 2.2 ng/mL.

Upper gastrointestinal endoscopy was normal. Colonoscopy was able to visualise the rectum and the sigmoid, descending and transverse colon up to hepatic flexure (figure 1). All visualised segments had normal mucosa, with no morphological changes and no other bleeding lesion. Colonoscopy was impossible to further passage through the ascending colon and caecum. CT was performed showing a regular ovoid 46×35 mm submucosal lesion located in the caecum/right colon was noted without retroperitoneal involvement or adenomegaly (figure 2).

DIFFERENTIAL DIAGNOSIS

- ▶ Adenocarcinoma
- ▶ Adenoma
- ▶ Gastrointestinal stromal tumour

TREATMENT

The patient was transfused with 2 units of packed red blood cells and underwent an open right hemicolectomy in elective fashion (figure 3) with

Figure 1 Colonoscopy image from the transverse colon without morphology changes or pathological lesions.

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Figure 2 CT scan showing a right/caecum colonic tumour.

Figure 3 Right hemicolectomy specimen. Arrow is pointing towards the caecum neoplasm (lipoma).

ileotransverse anastomosis. She was discharged on postoperative day 7 without complications. Histopathological analysis demonstrated an intramural caecum lipoma of 4×3 cm with acute and chronic mucosal inflammation above the tumour and granulation tissue as well (figure 4).

OUTCOME AND FOLLOW-UP

The patient had regular follow-up clinic visits. He remains asymptomatic 6 months following surgery. Her last complete blood count 4 months after surgery showed haemoglobin 11.2 mg/dL, haematocrit 34.1%, platelet count 364×10^3 and white cell count 8.22×10^3 cells.

DISCUSSION

Gastrointestinal lipomas are benign tumours that arise from adipocytes within the intestinal mucosa. These rare lesions were originally described by Bauer in 1757.² Colonic lipomas are uncommon adipose neoplasms with a reported incidence of

0.2–4% of cases. They are more prevalent in women than men, and mostly present in the fifth and sixth decade of life.³ They are usually solitary, well delineated, soft, spherically smooth yellowish lesions, although multiple localisations can be found in up to 5% of the cases. Colonic lipomas are more frequent in the ascending colon and caecum (60–70% of the cases) and left colon lesions are also more frequent in men than women. The majority of colonic lipomas (90%) are located at the submucosa and few have been documented at the subserosal level. They might vary in size from millimetres up to 30 cm.^{1–3}

Colonic lipomas are usually asymptomatic and are mostly found incidentally during colonoscopy, surgery or even autopsy. Symptoms are related to the size of the lipoma. They generally become symptomatic when they are larger than 3–4 cm. Abdominal pain and alteration in bowel habits such as diarrhoea or constipation are the most common clinical presentation of these tumours. Larger lipomas may cause symptoms due to mechanical interference causing intussusception or superficial ulceration of the mucosa covering the lipoma causing bleeding. Intussusception and gastrointestinal bleeding as well as perforation are rarely seen in these cases and no specific incidence data have been documented.^{2–7}

Different imaging techniques can be utilised for diagnosis of a colonic lipoma, although there are still difficulties in preoperative diagnosis between benign or malignant colonic neoplasms, and few reports have been able to demonstrate a precise diagnosis of symptomatic colonic lipomas. Barium enema can detect lipomas as an ovoid, well-delineated radiolucent mass.⁸ CT characteristics suggestive of colonic lipoma are: an ovoid mass with sharp margins and an absorption density similar to fatty tissue (−40 to −120 Hounsfield units).⁹ Colonic lipomas have certain colonoscopic features such as intact mucosal elevation over the lipoma and the 'naked fat sign', where the fat can be extruded after biopsy of the lesion. Even though these features can be present during a colonoscopy, they might have a firm fungating mass with ulceration and necrosis raising doubts about their malignant nature in examination.¹⁰ The use of endoscopic ultrasound demonstrating a hyperechoic lesion originating in the submucosal region might assist in the diagnosis of a colonic lipoma.¹¹

As far as treatment is concerned, surgery used to be the only treatment option for gastrointestinal lipomas. Minimally invasive endoscopic techniques have been developed for endoscopic removal. Lipomas <2 cm in diameter are considered safe for endoscopic removal.¹² Endoscopic removal is effective taking into account a detailed examination of the base of the lipoma in relation to its vasculature and the extension to the muscularis or serosa of the tumour. Currently, there are new endoscopic techniques for the safe removal of gastrointestinal lipomas >4 cm. Endoloop ligation techniques for larger lipomas eliminate the cautery-associated perforation risk, but endoscopist expertise

Figure 4 Intramural caecum lipoma (A), acute and chronic inflammatory process with granulation and mucosal erosion above the tumour (B).

plays a significant role in choosing the endoscopic removal technique.¹³ Surgery is more common in larger lipomas causing intussusception, obstruction and bleeding. Colotomy with lipectomy, limited colon resection, segmental resection, hemicolectomy or subtotal colectomy has been used successfully when the preoperative diagnosis of lipoma is questionable or complication occurs. The histopathological examination of gastrointestinal lipomas usually shows that well-differentiated tumours arising from adipose tissue in the bowel wall and malignant transformation have never been reported.^{2–7}

Learning points

- ▶ Colonic lipomas are rare tumours of the gastrointestinal tract.
- ▶ Symptoms are related to the size and location of the lipoma.
- ▶ Colonic lipomas should be considered in the differential diagnosis of large bowel tumours.
- ▶ Accurate preoperative diagnosis is difficult to obtain.
- ▶ Surgery remains the first treatment for large lipomas with gastrointestinal symptoms.

Competing interests None.

Patient consent Obtained.

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