



Giant Mesenteric Lipoma in an Adult

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ABSTRACT

Lipomas are benign mesenchymal tumors of mature adipocytes and commonly occur in the upper trunk. Mesenteric lipomas are relatively rare tumors of the gastrointestinal system. They are usually asymptomatic, detected incidentally on abdominal imaging, or can present with variable symptoms depending on the location, size, and rapidity of tumor growth. The ileal mesentery is the most common site, occurring in adults ranging from 40 to 60 years. We present the case of an unusually large mesenteric lipoma in an adult male patient who presented with vague abdominal pain.

INTRODUCTION

Lipomas are benign mesenchymal tumors of mature adipocytes and commonly occur in the upper trunk. Mesenteric lipomas are rare tumors of the gastrointestinal system.¹ They are either asymptomatic, diagnosed incidentally on abdominal imaging, or can present with variable abdominal symptoms depending on the size, location, and rapidity of growth of the tumor.^{2,3} When undetected, they can enlarge to massive proportions and present with abdominal symptoms late in the course.

CASE REPORT

A 33-year-old man was examined for nonspecific abdominal pain of 6-month duration. The clinical examination did not reveal any significant findings. Routine blood examinations showed triglycerides 176 mg/dL, high-density lipoprotein 46, and low-density lipoprotein 104 mg/dL. Ultrasound of the abdomen revealed a large echogenic lesion displacing the bowel loops. Contrast-enhanced computed tomography of the abdomen showed a well-defined large fat density filling the right side of the abdomen from the epigastrium to the pelvis displacing the bowel loops to the left side with no enhancing areas or calcification (Figure 1). A loop of ileum with its mesenteric vessels was seen passing through the mass. A diagnosis of mesenteric lipoma was made and proceeded to surgery. During laparotomy, a large lobulated mass was discovered in the small bowel mesentery involving and limited to a segment of the ileum measuring approximately 30 cm (Figure 2). The folds and lobulations of the lipomatous tumor were seen hanging from the small bowel mesentery, and there was no bowel obstruction. The rest of the bowel was normal, with no excess fat or lipomatous tumor in the abdomen. Complete excision of the lesion was performed with resection of the involved small bowel and mesentery followed by end-to-end anastomosis. The surgical specimen measured 30 × 30 × 12 cm and weighed 4 kg. A frozen section revealed benign adipose tissue only. In final histopathology, the lesion was composed of lobules of mature adipocytes separated by fine fibrous septa, confirming benign lipoma (Figure 3). No lipoblasts were seen. The patient made an uneventful postoperative recovery.

DISCUSSION

Lipomas are the most common mesenchymal soft-tissue tumors of adipocytes. They are commonly found in the trunk and proximal extremities and are rare on distal extremities and the face. They are rare in the oral cavity, breast, pancreas, and intestines. Mesenteric lipomas are even rarer among lipomas.¹ Mesenteric lipomas commonly occur in the fourth to sixth decades of life and are rare in



Figure 1. Abdominal contrast-enhanced computed tomography showed a well-defined large fat density swelling filling the right side of the abdomen displacing the bowel loops to the left side with no enhancing areas or calcification.

children. There is no definite gender predilection. The predisposing factors for lipoma are diabetes mellitus, obesity, dyslipidemia, genetic predisposition, blunt abdominal trauma, and prior radiation therapy.⁴⁻⁶

Most lipomas are asymptomatic and diagnosed incidentally on routine abdominal ultrasound imaging. When asymptomatic, they may grow to significant proportions and produce compressive symptoms late in the course. There is considerable variability in the presenting symptoms, such as abdominal pain, vomiting, weight loss, constipation, diarrhea, bleeding, or abdominal distension. It depends on the size, rapidity of growth, and location of the tumor.^{2,3} An acute abdomen can be a presenting symptom when lipomas lead to intestinal obstruction, perforation, or volvulus. Lipomas that produce volvulus or torsion are relatively smaller than those causing compressive symptoms.^{4,7,8}

Ultrasonography is often the first imaging modality used. It shows homogenous or heterogenous echogenic mass, which may be confused with the normal mesenteric fat.³ The gold standard diagnostic procedure is contrast-enhanced computed tomography of the abdomen. It shows an adipose tissue mass having well-defined margins and mesenteric vessels running in the involved mesentery with a characteristic -80 to -120 Hounsfield unit fat tissue attenuation values.^{3,9,10} The ileal mesentery is the most common location of mesenteric lipoma either in the root or at the luminal border of it. Magnetic resonance imaging of the abdomen also provides good tissue characterization and anatomic delineation of the mass. It shows homogenous signal intensity analogous to the fat tissue in all pulse sequences with thin fibrous septa showing hypointensity on T1-weighted and T2-weighted images.⁹

Small asymptomatic tumors are often left untreated.¹¹ Large and symptomatic ones are treated by total excision either by

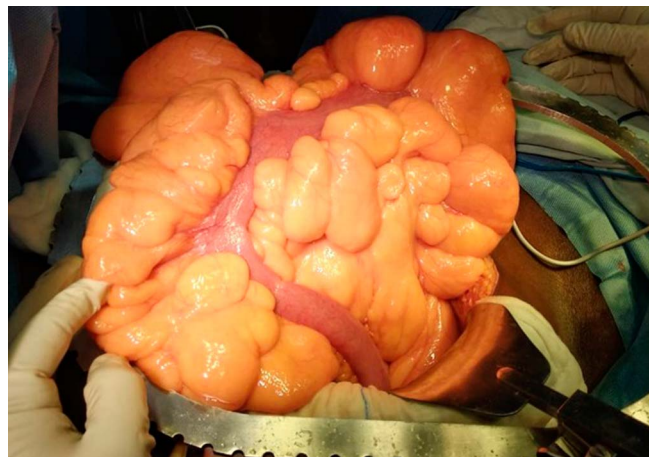


Figure 2. Perioperative appearance of mesenteric lipoma.

laparotomy or laparoscopy.¹² Resection of the tumor along with the involved bowel loop and end-to-end anastomosis is the usual treatment approach.^{13,14} Recurrence is low but is often due to incomplete resection.

Our patient had no comorbidities except mild hypertriglyceridemia. In his case, the clinical scenario, evaluation, and subsequent management match the standard recommendations from other case reports in the literature. In a systematic review¹⁵ of symptomatic small bowel lipomas ($n = 147$), abdominal pain was the most common presenting symptom (68.7%) followed by nausea or vomiting (35.3%) and hematochezia or gastrointestinal bleeding (33%). Among all small bowel lipomas, mesenteric location accounted for only 4.8% of cases. Laparotomy was the most used management strategy; often with resection of the involved bowel followed by end-to-end anastomosis. The size of the tumor had a significant impact on choosing the optimal management strategy; larger ones were most effectively treated with laparotomy.

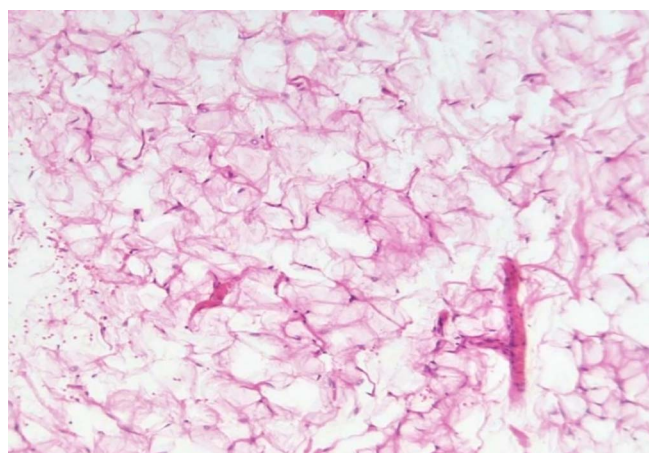


Figure 3. Histopathologic appearance of the mass showed lobules of mature adipocytes separated by fine fibrous septa.

DISCLOSURES

Author contributions: N. Vijayan wrote the article and reviewed the literature. M. Thekkeveetil cowrote and edited the article and is the article guarantor. S. Krishnadas and S. Sundaram were the radiologist and the pathologist, respectively, and edited the article.

Financial disclosure: None to report.

Informed consent was obtained for this case report.

Received April 21, 2021; Accepted September 14, 2021

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