



Case report

Mesenteric lipoma with small bowel volvulus: A rare cause of upper gastrointestinal obstruction (a case report and literature review)

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ABSTRACT

Introduction: Small bowel volvulus due to mesenteric lipoma is a rare clinical entity. It poses both a diagnostic and therapeutic challenge. Small bowel mesenteric lipoma is a rare cause of small bowel obstruction. We present the case of a patient admitted to our emergency department for a small bowel volvulus due to a mesenteric lipoma with small intestine obstruction.

Patient and method: A 61 years old man, with diabetes since 25 years with antidiabetics oral medication, vaccinated against Covid 19 (two doses) who presented with peri-umbilical pain for two months, constipation and melaena, complicated 3 days before his admission by obstructive symptoms and vomiting with apyrexia and overall health state alteration. The physical examination noticed abdomen distension and the abdominal CT scan revealed a large fatty mass of the hypochondrium and left flank, roughly oval with regular borders, well limited measuring 124 × 86 mm of height of 126 mm thought to be a liposarcoma. The patient underwent en bloc resection of 20 cm of small bowel with the mass and end to end anastomosis of the ileo-ileum. The postoperative course was uneventful and he was discharged from hospital on day 5.

Discussion: Mesenteric lipomas are diagnosed incidentally after laparoscopy or laparotomy. Ultrasound shows a well defined homogenous echogenic mass, and so can distinguish it from a mesenteric cyst. Computed Tomography (CT) is the standard imaging of diagnosis and shows homogenous tumor of adipose tissue. The treatment is surgery and the prognosis is better.

Conclusion: The mesenteric is an uncommon location of lipoma. When there is small bowel obstruction with intra-abdominal mass, the mesenteric lipoma could be recalled.

1. Introduction

Lipomas are benign neoplasms of adipose tissue that can occur almost anywhere [1]. Small bowel lipomas are rare and uncommon while small bowel obstructions are due essentially to the band after surgery; the occlusion of small bowel occlusion after strangulation due to mesenteric lipomas is very rare [2]. Here, we present a case of a small intestine volvulus caused by a giant small bowel mesenteric lipoma, which was successfully managed by small bowel resection through laparotomy. The aim of our study is describe a rare case of small bowel obstruction due to mesenteric lipoma. This case is presented in line with scare check list 2020 [3].

2. Case presentation

The patient was a 61 years old man, treated for diabetic since 25 years with oral antidiabetics medication, vaccinated against Covid 19 (two doses) who presented 2 months ago with peri-umbilical pain, constipation and melaena, worsened 3 days before his admission by obstructive symptoms and vomiting with apyrexia and overall health alteration. The physical examination noticed a conscious patient with pressure of 18/09, respiratory rate of 19 cycles, pulse of 86 beats per minute. Abdomen distended and tympanic. Non intraperitoneal mass found. The hernial area and lymph node examination were free. Rectal exam was normal. The rest of physical examination was unremarkable. Abdomino-pelvic CT scan show dilation of small intestine measuring of 33 mm in diameter with aerio-fluid levels upstream of a transitional

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level located at the umbilicus. Absence of defect of wall enhancement or pneumatosis. Peritoneal effusion in the left iliac fossa. A large fatty mass of the left hypochondrium and flank, oval with regular limits, measuring 124 × 86 × 126 mm. This mass makes a compression to the colon and is in contact to the abdominal wall without invasion (Fig. 1). Multiple nodes, coelio mesenteric, lumbar and aortic. The biology assessment is shown in Table 1.

He underwent in emergency the resection of 20 cm of small bowel en bloc with the mass through laparotomy approach. An end to end anastomosis of the ileum was performed. The exploration found a fatty mass, mobile attached at the side of the mesenteric side of the small bowel of 10 cm located at 1 m 60 cm from the duodenojejunal angle associated with a small intestine volvulus of two rounds counterclockwise spiral and dilation of proximal portion of small intestine of 3.5 cm, without complications signs (Figs. 2 and 3). The postoperative was uneventful and the patient was discharged from hospital at D5 with oral feed allowed at D4. The specimen analysis showed a proliferative adipose tissue cells with confirmation of lipoma on immunohistochemistry.

3. Discussion

A lipoma is a benign tumor of mature adipocytes which can develop almost at any part of the body especially the trunk, extremities, or intraperitoneal. The differential diagnosis is liposarcoma, which has a high degree of malignancy and recurrence rate [2]. Small bowel volvulus is rare and only few cases have been reported worldwide. Volvulus of the small bowel accounts for less than 7% of all cases of small bowel obstruction and can be attributed to primary or secondary causes. Primary volvulus occurs without anatomic abnormalities while the secondary volvulus is due to anatomical abnormalities and the most common is an incomplete common mesentery [4]. The small bowel obstruction after volvulus due to a mesenteric lipoma is extremely rare. By the way, the small bowel is not a common location of lipoma even the intraperitoneal cavity. The site of location, the number and the size of lipomas in the intraperitoneal cavity are largely different and present with a variety of symptoms without specificity. According to the site,

Table 1
Biology assessment results.

Tests	Results
Hemoglobin	12,7 g/dl
White blue cells	8950/mm ³
Platelet	193,000/mm ³
Natremia	129 mg/l
Kaliemia	4.9 mmol/l
Urea	1.32 g/l
Creatininemia	20.8 mg/l
ASAT	20 UI/l
ALAT	22 UI/l
C reactive protein	37,8 mg/l
Prothrombin rate	102%
Cephalin actic rate	26 s
Albumin	39 g/l



Fig. 2. Peroperative image of mesenteric lipoma with small intestine volvulation.

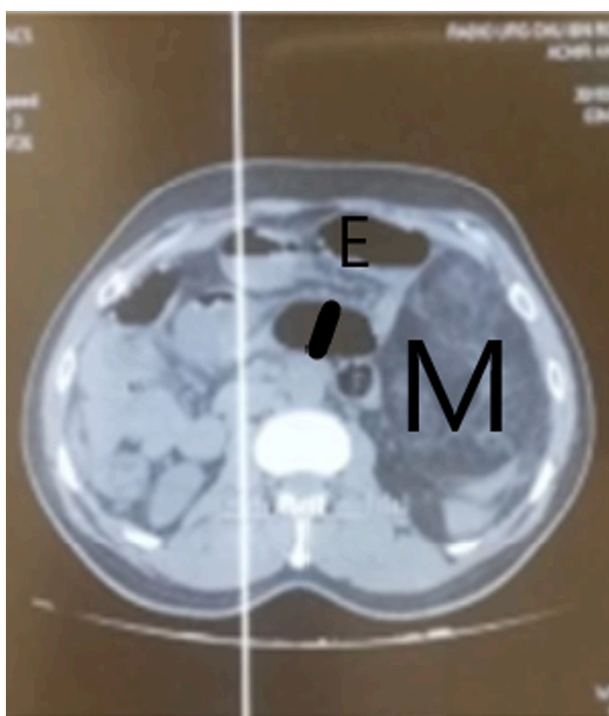


Fig. 1. Abdomen CT scan image showing a fatty mass in the abdomen (M) the stomach € with jejunum distension (black line).

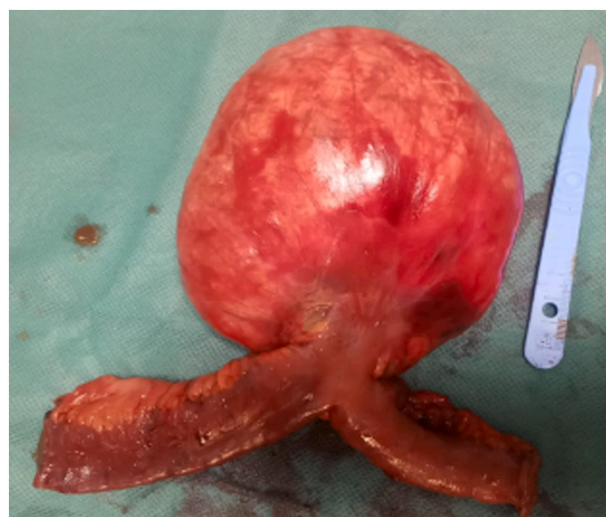


Fig. 3. The specimen after resection with small bowel portion.

they are mesenteric, antimesenteric and submucosa lipoma while for the number, isolated lipoma, multiple circumscribed lipomas, diffuse nodular lipomatosis, and diffuse adipose tissue infiltration of the submucosa without tumor formation are described in literature [5].

They occur in adults between fortieth and sixtieth years and rarely in children under ten years. The factors that predispose to lipoma are obesity, diabetes mellitus, hypercholesterolemia, familial tendency, trauma, radiation therapy and chromosomal translocation. They either occur in the root of the mesentery or at the luminal edge of the mesentery [6]. These lipomas are usually asymptomatic because most allow passage of small bowel as the lipomas are soft and mobile masses which do not infiltrate surrounding structures. Mesenteric lipomas are diagnosed incidentally after laparoscopy or laparotomy. The common symptoms are vague abdominal pain, distension, anorexia and weight loss. Rarely, patients present with intestinal obstruction, and this is usually due to small bowel volvulus or intussusception caused by the lipoma. Mesenteric lipomas are usually asymptomatic, but larger lipomas can twist around their pedicle, leading to volvulus and ischemia and infarction. In case of torsion, patient present acute abdomen with onset of pain and imaging may show inflammatory changes, such as edema and fat stranding. Few cases of mesenteric lipomas complicated with torsion are described in the literature [7]. Ultrasound shows a well defined homogenous echogenic mass, and so can distinguish it from a mesenteric cyst. Computed Tomography (CT) is the standard imaging of diagnosis and shows homogenous tumor of adipose tissue. Also gives information about effect on the small bowel, whether there is evidence of ischemia and may demonstrate the typical whirl like pattern of a volvulus. Liposarcoma, lymphangioma, lymphangiolipoma, neuroblastoma and lymphoma are important differential diagnosis of mesenteric lipoma that should be considered [8]. Treatment of large or symptomatic mesenteric lipomas involves surgical resection of the lipoma with the adjacent small bowel and end-to-end anastomosis. However, enucleation of tumor from has been reported. Laparoscopic approach has also been reported. Although mesenteric lipomas are rare, they must be considered for diagnostic in cases of long standing abdominal pain, with intraperitoneal fat tissue mass on imaging. The treatment involves laparotomy with en bloc resection the segment of the bowel [6,9].

4. Conclusion

The mesenteric lipomas are uncommon localisation. The small bowel volvulus is a life threatening pathology with rapid complications such as necrosis. The small bowel obstruction due to mesenteric lipoma localisation is unusual. Although lipomas are benign, they can lead to severe complications and might be treated when diagnosed.

Provenance and peer review

Not commissioned, externally peer-reviewed.

Consent

Written informed consent was obtained from the patient for publication of this case report and accompanying images. A copy of the written consent is available for review by the Editor-in-Chief of this journal on request.

Ethical approval

The study is exempt from ethical approval in our institution.

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CRediT authorship contribution statement

Mounir Bouali: designed the study, wrote the protocol and the first draft of the manuscript

Sylvestre KABURA: designed the study, wrote the protocol and the first draft of the manuscript

ElBakouri Abdelillah: managed the analyses, and the correction of the manuscript

Khalid ElHattabi: managed the analyses, and the correction of the manuscript

Fatima Zahra Bensardi: managed the analyses, and the correction of the manuscript

Fadil Abdelaziz: managed the analyses, and the correction of the manuscript.

All authors read and approved the final manuscript.

Declaration of competing interest

No conflicts of interest.

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