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 enbloc 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 been discharged from hospital on day 5.

Discussion: Mesenteric lipomas are diagnosed incidentally after laparoscopy or laparatomy. 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 diabetes 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 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 enbloc 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 been discharged from hospital on day 5.

Rectal exam was normal. The rest of physical examination was unremarkable. Abdomino-pelvic CT scan show dilatation of small intestine measuring of 33 mm in diameter with aeric-fluid levels upstream of a transitional obstruction.
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 $124 \times 86 \times 126$ mm. This mass makes a compression to the colon and is in contact to the abdominal wall without invasion (Fig. 1). Multiple nodes, coelo mesenteric, lumbar and aortic. The biology assessment is shown in Table 1.

He underwent in emergency the resection of 20 cm of small bowel enbloc 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,

| Tests               | Results    |
|---------------------|------------|
| Hemoglobin          | 12.7 g/dl  |
| White blue cells    | 8950/mm$^3$ |
| Platelet            | 193,000/mm$^3$ |
| Natremia            | 129 mg/l   |
| Kalaemia            | 4.9 mmol/l |
| Urea                | 1.32 g/l   |
| Creatinemia         | 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. 1. Abdomen CT scan image showing a fatty mass in the abdomen (M) the stomach (E) with jejunum distension (black line).](image1)

![Fig. 2. Peroperative image of mesenteric lipoma with small intestine volvulation.](image2)

![Fig. 3. The specimen after resection with small bowel portion.](image3)
they are mesenteric, antimesenteric and submucosa lipoma while for the
can occur in adults between forty and sixty 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 mes-
tery [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 diag-
nosed 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 li-

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Mourir 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
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ElBakouri Abdelillah: managed the analyses, and the correction of
the manuscript
Khalid ElHattabi: managed the analyses, and the correction of the
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Declaration of competing interest
No conflicts of interest.

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