Mesenteric Lipoma revealed by chronic abdominal pain: A rare challenging diagnosis

kais fourati[1], Abderrahmen Masmoudi[2], Amine Zouari[2], Rami Zouari[2], jawhar Bradai[2], Najmeddine Hentati[2], and Salah Boujelbene[1]

[1]University of Sfax Faculty of Medecine of Sfax
[2]Habib Bourguiba Hospital

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Abstract

Mesenteric Lipoma is very rare. Diagnosis is challenging because of nonspecific clinical presentation. Complete resection of the lipoma is proposed to relieve pain, and prevent complications. We report a case of mesenteric lipoma revealed by chronic abdominal pain and we performed a litterature review regarding this rare condition.

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Authors: Kais Fourati [1], Abderrahmen Masmoudi[1], Amine Zouari [1], Rami Zouari[1] , Jawhar Bradai [2] , Najmeddine Hentati [1],Salah Boujelbene [1]

1 General surgery Department, Habib Bourguiba Hospital, Sfax, TN 3089

2 Radiology Department, Habib Bourguiba Hospital, Sfax, TN 30893

Correspondance: Kais Fourati,Department of surgery, Habib Bourguiba Hospital, Sfax, Tunisia General Surgery Department Habib Bourguiba Hospital University of Sfax 0.5 km Sfax, TN 3021

E-mail:*kaisfourati51@gmail.com*Num : 58084298

Consent statement

Written informed consent was obtained from the patient to publish this report in accordance with the journal's patient consent policy

Mesenteric Lipoma revealed by chronic abdominal pain: A rare challenging diagnosis

Key Clinical Message :

Mesenteric localization of lipoma is extremely rare. It may be considered in patient presenting with chronic abdominal pain. Complete resection of the tumor is indicated to relieve the pain and prevent complications.

Key Words: Mesenteric Lipoma, Abdominal Pain, surgery

Introduction

Lipoma is a rare benign lesion of mature adipose tissue and commonly occur in the cephalic part of the body (1,2). Its localization in the mesentery is extremely rare (1). Few cases of mesenteric lipomas have been reported in the literature (2).The course is usually asymptomatic and the clinical findings depend on the

size of the lipoma, its location and the rapidity of growth of the tumor (1). We report a case of mesenteric lipoma revealed by chronic abdominal pain along with a litterature review regarding this rare condition.

Case report

A 22-year-old Tunisian man without a medical history presented to the hospital with abdominal pain located in the right iliac fossa. The pain began 2 years ago with a paroxysmal evolution, but it has worsened over the last 6 months. The patient also complained of chronic abdominal discomfort. There was no signs of bowel obstruction. Physical examination found tenderness of the right iliac fossa without a palpable mass (Figure 1). Biology tests showed no abnormalities, in particular, C-reactive protein was within the normal range. We performed an abdominal ultrasound which showed a well-defined, homogenous mass of the right iliac fossa of 10 x 8 cm.

The abdominal scan showed a well-defined mass in the mesentery measuring 12 x 9 cm with fat density surrounded by a thin capsule. This mass did not enhance after injection of contrast product with no septum or calcification. There was no lymphadenopathy or invasion of neighboring organs. The CT scan images were most consistent with a mesenteric lipoma (Figure 2). Therefore, surgery was decided. Exploration of the abdomen by midline laparotomy revealed an encapsulated, mobile and yellowish mass originating from the ileal mesentery without any adhesions to other organs. There were no necrosis or hemorrhage within the mass. Complete excision of the lesion was performed with a clear plan of cleavage between the tumor and the ileal mesentery (Figure 3,4). The mesenteric bed was kept intact with its vascular structures (Figure 5). The pathology of the specimen was consistent with benign lipoma. The postoperative period was uneventful, and the patient was discharged on the third postoperative day. Upon follow up, the patient was followed up regularly for more than 2 years. No recurrence has been diagnosed.

Discussion

Lipomas are the most common soft tissue tumours of adipocytes. They are commonly located in proximal extremities and the trunk (1). Among all small bowel lipomas, mesenteric location accounted for only 4.8% of all cases (1).

It usually occurs in adults in the fourth to sixth decades of life (2). They are rarer in children and young people as in the case of our patient (1,3). There is an increased incidence of lipomas in patients with obesity ,diabetes mellitus, hypercholesterolemia, genetic predisposition and radiation therapy (3,4).However, our patient was thin and none of these factors was found in.

Mesenteric lipomas have generally a slow growth without invasion of surrounding organs (5). Besides, due to their soft consistency, most patients are asymptomatic with a chance discovery during abdominal laparotomy or CT scan done for other indications (1,6). The onset of symptoms depends on the size, rapidity of growth, and location of the tumor (1). An acute abdomen can reveal lipomas as they can lead to intestinal obstruction or volvulus(1,5). Less frequently, they can be revealed by chronic abdominal pain as in the case of our patient.

As the first-line investigation tool for abdominal pain due to its low cost, ultrasound shows homogenous or heterogenous well-limited and encapsulated intraperitoneal mass which may be confused with the mesenteric fat (1,7). Computed tomography (CT) scan of the abdomen is the gold standard imaging technique and plays a crucial role in the diagnosis of mesenteric lipoma (1). It allows the analyse of the nature and the density of the lesion, its exact location, its size and its extent. It typically shows an intraperitoneal and encapsulated mass with fatty attenuation with no lobulations, septations, or cystic organization (1,8). Mesenteric lipomas are often located in the ileal mesentery as in our case (1) .The first differential diagnosis to be suspected are liposarcomas. They are heterogeneous and contain thick septa with tumor extension to adjacent organs

(9). Other rare differential diagnoses should be suggested, in particular lipoblastoma, cystic lymphangioma, lymphangiolipoma and neuroblastoma, but their radiological aspects are different from those of lipomas (5).

Magnetic resonance imaging (MRI) is also very performant to describe in detail the characteristics of the mass. She shows a hypointensity on T1-weighted and T2-weighted images without modification of the signal after injection of gadolinium (1). It confirms the fatty nature of the tumor and differentiates giant lipomas from well-differentiated liposarcomas (2). It prevents from doing invasive diagnostic techniques such as biopsy before surgery (2).

Therapeutic management of mesenteric lipoma is not consensual and it is based on the experience of the different teams. A small lipoma in a asymptomatic patient can be left in place (1). In the absence of signs of malignancy , complete surgical resection with, or if possible without, the affected intestinal loop is the treatment of choice due to the risk of intestinal obstruction by compression or volvulus (1,5). Laparotomy was the most used management strategy often with resection of the involved bowel followed by end-to-end anastomosis (1). Laparoscopy may be indicated particularly in cases of small lipoma with a clear plane of cleavage between the tumor and the adjacent small intestine, thus allowing enucleation of the mass (2). In our case, CT scan showed a typical benign mesenteric lipoma. Therefore, after an exploratory laparotomy, we performed a complete resection of the mass while conserving the intestine.

The recurrence rate of all lipomas after surgery is less than 5%, and is usually due to incomplete excision (6).

Conclusion

Mesenteric lipoma is a rare condition reported in the literature. However, it should be considered in the differential diagnosis of unexplained chronic abdominal pain. Contrast-enhanced computed tomography is the gold standard diagnostic procedure. Treatment is based on complete surgical resection with or without the affected intestinal loop, particularly, in case of symptomatic and / or large lipoma to prevent the risk of complications.

Summary

This report describes a rare case of mesenteric lipoma revealed by chronic abdominal pain in 22-year-old Tunisian man.

Diagnosis is challenging because of nonspecific clinical presentation and in the absence of risk factor. The CT scan images were most consistent with a lipoma and shows no signs of malignancy. Complete excision of the lesion was performed with a clear plan of cleavage between the tumour and the ileal mesentery.

Histopathologic examination showed benign lipoma. The postoperative period was uneventful and no recurrence has been diagnosed.

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None declared

Conflicts of interest

None declared

Ethic Statement:

Personal data have been respected

Consent statement

Written informed consent was obtained from the patient to publish this report in accordance with the journal's patient consent policy

Authors' contribution

Kais Fourati writing –review and editing ; Masmoudi Abderrahmen : Writing – review and editing ;Amine Zouari: Writing – review and editing ; Rami Zouari : review and editing (equal); Bradai Jawhar: Conceptualization; Najmeddine Hentati: Validation- Supervision; Salah Boujelbene: Validation- Supervision.

All authors read and approved the final manuscript.

Data Availability Statement

Personal data of the patient were respected. No data is available for this submission.

Abbreviations

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Figures

Figure 1: Preoperative image of the abdomen

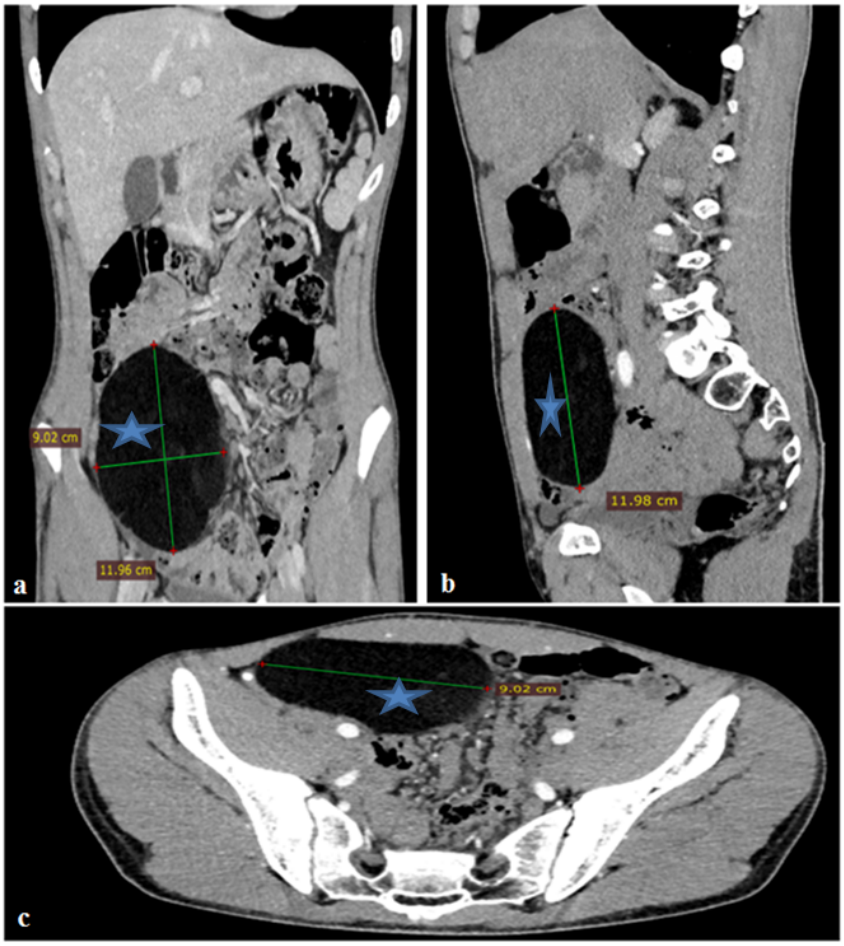

Figure 2: Abdominopelvic CT scan showing mesenteric lipoma in the right iliac fossa

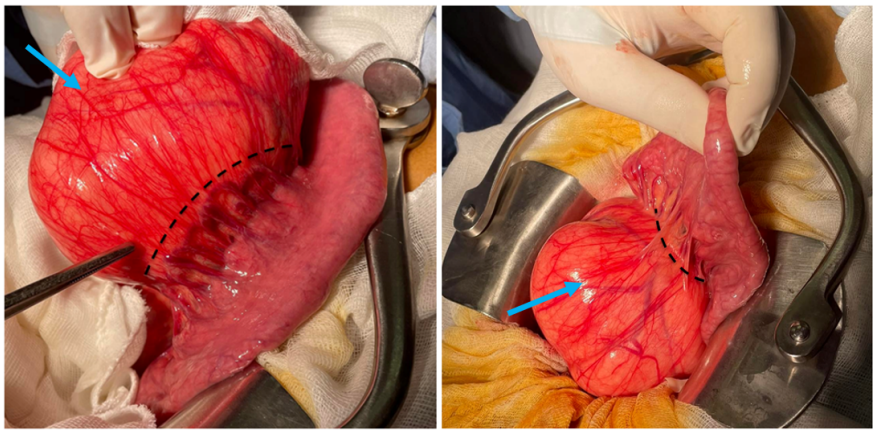

Figure 3: Intraoperative imaging of the lipoma: dashed lines show the clivage plan between the lipoma (blue arrow) and the mesentere

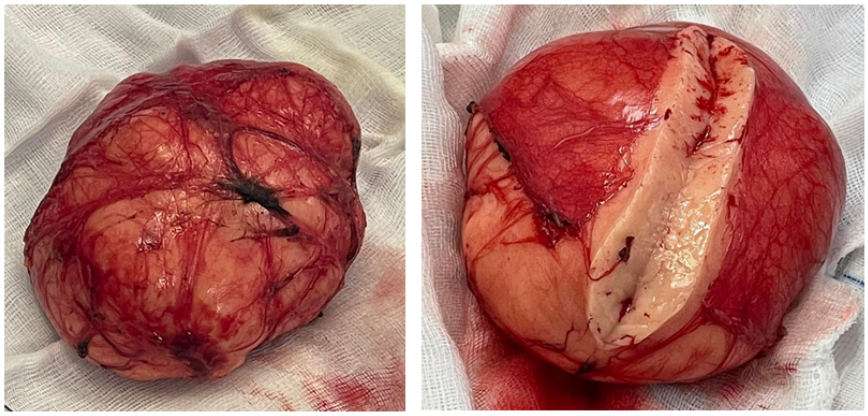

Figure 4 : Operative specimen

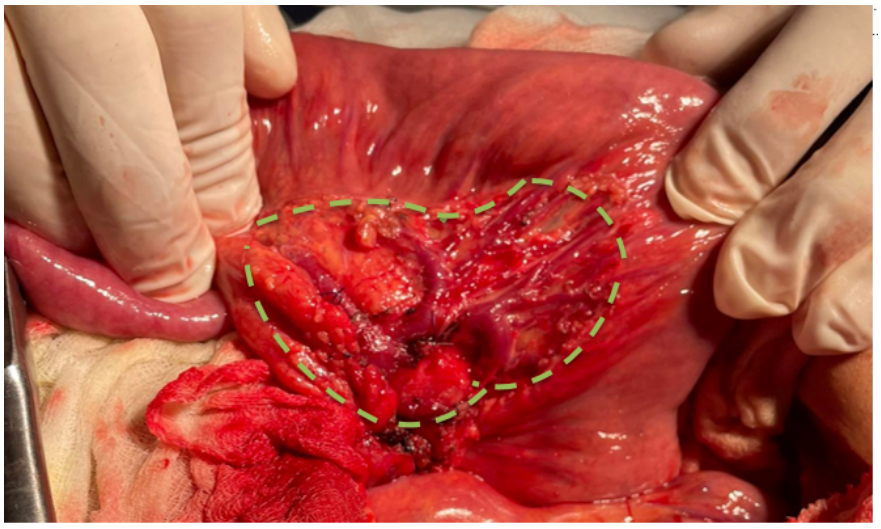

Figure 5 : Intraoperative imaging after resection of the lipoma with the mesenteric bed kept intact (dashed lines).