

# A rare case of double mesenteric liposarcoma

Chee Ching Chan and Essam Ghareeb

*Surgical Unit, Erne Hospital, Enniskillen BT74 6AY, Northern Ireland, UK*

*Corresponding address: Chee Ching Chan, Surgical Unit, Erne Hospital, Enniskillen BT74 6AY, Northern Ireland, UK.*

*Email: chanceeching@gmail.com*

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## Abstract

Primary mesenteric liposarcoma is a rare malignant tumour of mesenchymal origin. Under the MeSH classification, mesenteric liposarcoma appears to be classified with retroperitoneal neoplasms. Two synchronous mesenteric liposarcomas must be very unusual. We report a rare case of double mesenteric liposarcoma in a 66-year-old female patient. She was treated with wide surgical resection alone without adjuvant chemotherapy and she recovered fully.

## Keywords

Liposarcoma; mesentery; retroperitoneal neoplasms; peritoneal neoplasms; surgery.

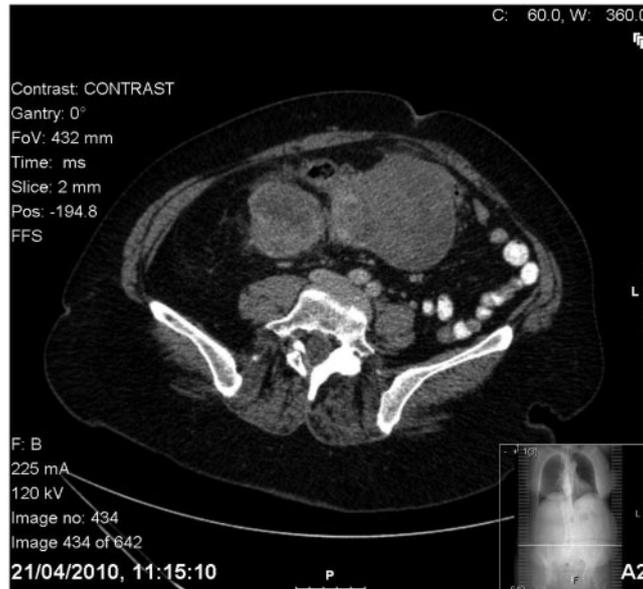
## Introduction

A liposarcoma is the most common soft tissue sarcoma in adults with an incidence of about 20% of all soft tissue sarcomas. Although incidence differs in the region of origination, a case arising from the mesentery has rarely been reported<sup>[1]</sup>. The Royal Marsden experience reported 72 patients with primary retroperitoneal liposarcoma, of which 9 arose in mesenteries<sup>[2]</sup>. This suggests that true number of reported tumours is higher. Two synchronous tumours must, however, be very unusual. During our literature search, we have not found any reported case of double mesenteric liposarcoma. Currently, the treatment of choice for primary mesenteric liposarcoma is surgical resection with clear margins<sup>[3]</sup>.

## Case report

A 66-year-old female patient was referred by her general practitioner to the outpatient clinic with a 6-month history of anorexia and vague abdominal pain. She was also complaining of a painless swelling at the epigastric region of approximately 1 month duration. On general examination, she has pallor. Examination of the abdomen revealed a distended abdomen with a large fixed solid mass palpable at the epigastric area. The mass was non-tender, non-pulsatile, non-expansile and approximately 5 × 6 cm in size. A second solid, fixed abdominal mass was palpable at her right iliac fossa. The size was approximately 3 × 4 cm.

An ultrasound scan of the abdomen and pelvis was done first followed by an enhanced computed tomography (CT) scan of the thorax, abdomen and pelvis. The radiologic imaging



**Fig. 1.** Axial CT scan of the abdomen showed that two large heterogenic soft tissue masses present in the mid/lower abdomen, separate from each other, measuring 11.3 cm and 9.4 cm, respectively.



**Fig. 2.** Axial CT scan of the abdomen showed the mass with adjacent infiltration of the mesenteric fat.

(Figs. 1 and 2) revealed 2 large heterogeneous soft tissue masses in the mid/lower abdomen, separated from each other. The larger mass measured about 11.3 cm and the smaller mass measured about 9.4 cm respectively. On the CT scan of the abdomen, the masses seemed to invade the transverse colon and right side of the colon. Adjacent infiltration of the mesentery fat was present with the masses.

## Surgery

After discussion at multi-disciplinary meeting, it was decided that surgical resection was needed for diagnostic purpose and also for symptomatic reasons. After a midline laparotomy incision, we noted that the first mass was in the mesocolon and adherent to the proximal transverse colon which was tightly stretched over it. The size measured during the operation and was about 15 × 10 cm. The second mass was in the right mesocolon with ascending colon close to it. The size

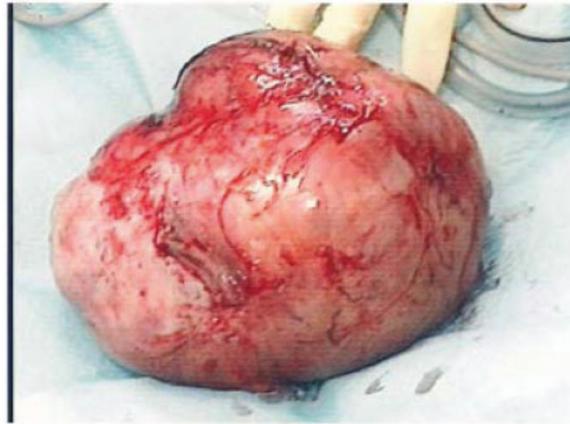


Fig. 3. Macroscopic appearance of the mass.

was about 12 × 8 cm. Both masses had large veins on the surface, but no signs of invasion to surrounding structures. Both masses were dissected by opening the mesentery and cutting adhesions. The proximal transverse colon had to be opened; otherwise the first mass would not have been excised successfully. The proximal transverse colon opening was closed with 2.0 Vicryl in 2 layers with no leak afterwards. Venous bleeding was stopped with Harmonic Scalpel, 3.0 Vicryl and diathermy (Fig. 3).

## Histology

The pathologist later reported that there were 2 smooth-walled circumscribed masses with cut sections showed solid fleshy surfaces. One weighed 943 g and measured 160 × 120 × 90 mm; the other weighed 544 g and measured 120 × 100 × 80 mm. Sections from both masses were similar although more poorly differentiated in the smaller specimen. Histology showed sheets of atypical spindle cells with some vacuolated cytoplasm. Areas of geographic coagulative type necrosis were evident. The cells stained positively for vimentin and MDM2 but negatively for SMA, AE1/AE3 and S100. The morphology and the immunohistochemical profile were in keeping with liposarcoma.

## Outcome and follow-up

The patient was discharged 6 days after her operation. Her histology results were discussed at the multi-disciplinary meeting and it was decided that the patient should be referred for adjuvant chemotherapy and radiotherapy. After assessment by the oncologist for the patient's poorly differentiated mesenteric liposarcoma, the oncologist was inclined to consider that the patient's management was complete with surgery and leave her for follow-up CT scan. At the time of writing this case report (6 months after surgery), the patient has no tumour recurrence, which is quite remarkable based on the unfavourable histology of her 2 poorly differentiated liposarcomas.

## Discussion

During a literature search, we found that at least 22 cases of mesenteric liposarcoma have been reported to date (Table 1). We searched PubMed using MeSH terms with keywords 'mesentery' and 'liposarcoma' and generated the above results. Larger studies such as the Royal Marsden experience also reported mesenteric liposarcoma in some of their patients<sup>[2]</sup>. However, 2 synchronous mesenteric liposarcomas must be unusual and during our literature search we did not find any reported case. Only one similar case has been reported before by Satheesan; their patient had a dumbbell-shaped mesenteric liposarcoma.

Liposarcoma arising from the bowel mesentery is rare<sup>[4]</sup>. The most common malignant mesenteric tumour is malignant lymphoma, followed by leiomyosarcoma and liposarcoma. Primary mesenteric liposarcomas occur during the fifth to seventh decades of life; our patient was 66 years old. The incidence is slightly higher in men than in women. Common presenting

**Table 1.** References for mesenteric liposarcoma found from the PubMed search

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symptoms of primary mesenteric liposarcoma include abdominal pain, weight loss, increasing abdominal girth, abdominal discomfort with meals, and the presence of a freely movable abdominal mass. Our patient had abdominal pain, the presence of an abdominal mass and anorexia. Synchronous neoplasm is the existence of 2 or more primary cancers that are not an extension from the primary tissue site, recurrence, or metastasis. Various factors have been considered including carcinogenic substances such as tobacco, alcohol, dyes, immunosuppression, sequelae of radiotherapy, chemotherapy or organ transplantation. In our patient, we could not identify any obvious cause.

Radiologic imaging provides a clue regarding the diagnosis of liposarcoma as demonstrated in our case. Histology later confirmed the diagnosis. Liposarcomas are grouped into 4 major categories: myxoid, well-differentiated, pleomorphic and round-cell. Myxoid liposarcoma is the most common type. In our patient, both the mesenteric liposarcomas were poorly differentiated, much more so in the smaller mass. Complete surgical resection at the time of primary presentation is likely to give a chance for long-term survival as well as distant recurrence-free survival<sup>[5]</sup>. A meta-analysis of 14 randomized trials of adjuvant therapy for soft tissue sarcoma in adults provided evidence that chemotherapy improves the time to local and distant recurrence and overall recurrence-free survival, although no studies have been done for mesenteric liposarcoma alone<sup>[6]</sup>. In our patient, we completely resected the tumours and histology later confirmed clear margins. After assessing the patient for her poorly differentiated double mesenteric liposarcomas, our oncologist was aware of the risk of local recurrence and also distant spread. However, our oncologist thought that adjuvant chemotherapy has no proven role and could certainly be quite toxic. In conclusion, our patient only had surgical treatment without adjuvant chemotherapy and she has no tumour recurrence at the time of writing this case report. Further cases of synchronous mesenteric liposarcoma will be needed for future review.

### Teaching points

- Synchronous mesenteric liposarcomas are rare.
- Complete surgical resection without adjuvant chemotherapy may be the treatment of choice.

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