Huge mesenteric liposarcoma

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Abstract

Primary mesenteric liposarcoma is extremely rare and is treated by aggressive surgical management i.e. wide excision with adequate margins (in the absence of distant metastases). We report a case of huge slow-growing primary mesenteric liposarcoma in a 52-year-old man, who presented with gross abdominal distension. He was anaemic with pre-operative imaging demonstrating a well-encapsulated huge solid tumour filling the whole abdomen, abutting the anterior abdominal wall without any evidence of distance metastasis or ascites. The patient underwent successful resection of the tumour which weighed 22 kilograms. Histopathology confirmed a well-differentiated liposarcoma with rare mitoses. The patient received full eight cycles of adjuvant chemotherapy. After five years of clinical and imaging follow-up, there was no evidence of metastasis or recurrence of the disease.

Keywords: Liposarcoma, Mesentery, Preoperative imaging, Surgical resection, Follow-up, Chemotherapy.

Introduction

Primary mesenteric liposarcoma is a rare entity that has been reported only 14 times in English literature. It usually presents as an abdominal mass of indeterminate origin with vague abdominal pain. The treatment strategy for mesenteric liposarcoma is surgical resection with a wide surgical margin if no distant metastases are detected, often followed by radiation and/or adjuvant chemotherapy for high-risk patients only. The most commonly encountered among the malignant mesenteric tumours are lymphomas followed by leiomyosarcoma.[1] We present a case of huge mesenteric liposarcoma which was mistakenly labelled as a case of retroperitoneal sarcoma and the patient was being denied surgery for fear of irresectability due to its very large size.

Case Report

A 52-year-old male presented with abdominal distension for 6 months. He had a history of vague abdominal discomfort, but there were no other symptoms. His medical and surgical history was insignificant. There were no reported allergies and non-specific drug intake for the symptoms. Due to gradual but persistent distension of the abdomen, he had attempted suicide twice by stabbing the abdomen in the preceding one month as he was told that there was a tumour in his abdomen which was irresectable. The patient was investigated elsewhere and was finally labelled as a case of retroperitoneal sarcoma without a biopsy and was referred to us by an oncologist for de-bulking of the tumour before chemotherapy (Figure-1).

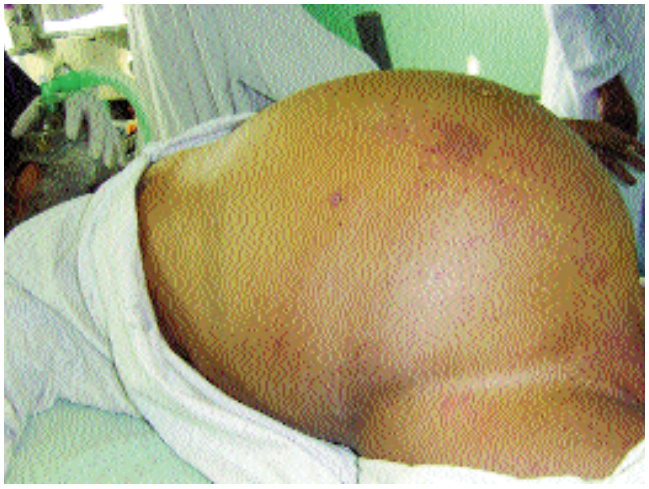

Figure-1: Huge abdominal distension pre-operatively.

On examination, he had normal vitals, and had no pallor, jaundice or any lymphadenopathy. There was no dependent oedema or venous engorgement in the lower limbs. Abdominal examination revealed a distended abdomen, but there were no engorged veins. There was a huge mass occupying the whole of the abdomen. It was non-tender, with a palpable lower limit and dull on percussion.

On investigations, the haemoglobin was 8.8gm%. Routine serology was found to be normal. Chest X-ray (CXR) and electrocardiogram (ECG) were normal. Ultrasound of the abdomen showed a solid mass of indeterminate origin. Computed tomography (CT) scan showed a well-capsulated mass apparently attached to the anterior abdominal wall compressing the gut. Liver and rest of the viscera were normal and there was no evidence of origin

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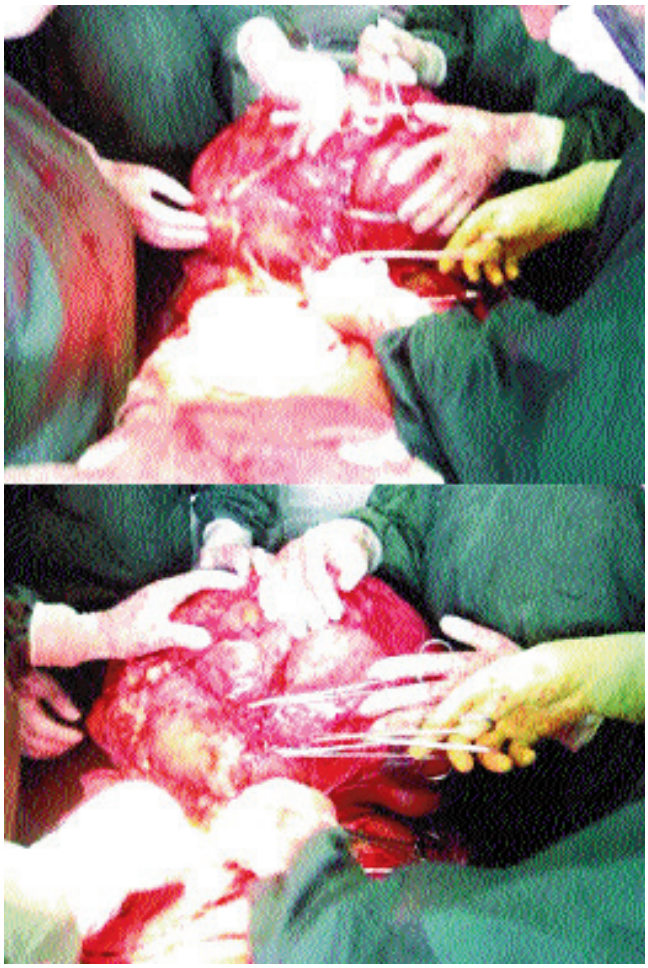

Figure-2-3: Mesenteric liposarcoma during resection.

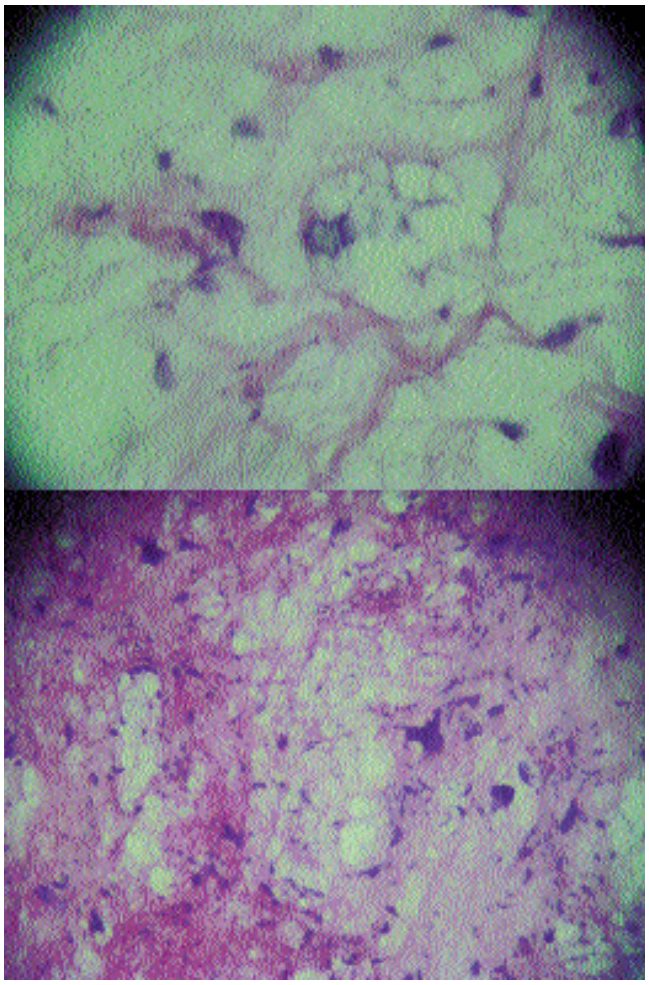

Figure-4-5: Histopathological appearances of liposarcoma.

of mass from the retroperitoneum or any retroperitoneal organs. No free fluid was seen in abdomen. Fine needle aspiration cytology confirmed the diagnosis of liposarcoma.

The patient was prepared for the surgery physically and mentally. Two pints of blood were transfused to raise the haemoglobin levels. Exploratory laparotomy was performed. The mass was found to be well encapsulated and arising from small gut mesentery from which it was easily excised intact (Figure-2 and 3). There was a small injury to inferior mesenteric artery which was repaired with no post-operative consequences. Liver and all other viscera were free of any local invasion or metastasis. The tumour weighed 22 kilograms and turned out to be a well-differentiated liposarcoma on histopathological analysis with rare mitoses (< 5/50 HPF) (Figure-4 and 5). The patient was referred for oncological management where he received full eight cycles of chemotherapy. After five years of clinical and radiological follow-up, there was no evidence of recurrences or metastasis of the disease.

Discussion

Sarcomas are mesenchymal neoplasms which arise from skeletal and smooth muscle, adipose and fibrous tissue, bone, and cartilage. They are of mesodermal origin.[1] A few arise from neuroectoderm. They constitute 0.7% of all new cancers and can affect any age and any site.

The lower extremity is the most common location for liposarcoma to occur, accounting for 56% of all the liposarcomas. The retroperitoneum is the next most frequent location with 15% to 20% of all liposarcomas. Primary liposarcoma arising from the mesentery of the bowel is a rare lesion.[2] Primary mesenteric liposarcomas typically occur during the fifth to seventh decade of life and the incidence is slightly higher in males compared to the females.[3] Some of the most common presenting symptoms of primary mesenteric liposarcoma include increasing abdominal girth, weight loss, abdominal pain,

abdominal discomfort with meals, and the presence of a freely mobile abdominal mass or masses.[4] Histopathologically, liposarcomas are grouped into four major categories: myxoid, well-differentiated, pleomorphic, and round-cell. Myxoid lesions are considered intermediate-grade, and pleomorphic and round-cell lesions are considered high-grade.[5] Spillane et al[6] observed the association of any round-cell component with myxoid liposarcomas to have a substantially higher risk for metastatic disease.[7]

The treatment strategy for mesenteric liposarcoma is the same as that for retroperitoneal liposarcoma.[8] The treatment of choice for such liposarcoma is surgical resection with sufficient surgical margin,[9] often followed by radiation and/or adjuvant chemotherapy for those with a high risk of relapse, such as for large tumours or low-grade tumours. The most effective chemotherapeutic agent was found to be doxorubicin. The efficacy of pre-operative chemotherapy is not established.[8] Neither radiotherapy nor systemic chemotherapy has proven to be of benefit in increasing long-term survival.[10] Prognosis is based upon the most aggressive histological subtype in the lesion.[11] Well-differentiated lesions are considered low-grade malignancies.[12] Our patient is currently alive and well with no evidence of tumour recurrence 5 years after resection of his primary mesenteric liposarcoma, which is quite remarkable based on the size of his tumour.

Conclusion

Primary mesenteric liposarcoma is extremely rare and is treated by aggressive surgical management i.e. surgical resection with a wide surgical margin if no distant metastases are detected, often followed by radiation and/or adjuvant chemotherapy for high-risk patients only. As the patient in our case had a large, low-grade, well-differentiated tumour, he was given the full cycle of chemotherapy after surgical removal of the tumour, following which he has remained disease-free five years after the resection of the liposarcoma.

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