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Liposarcoma: A Case Report

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ABSTRACT

Liposarcomas are malignant tumours of fatty tissue and are malignant counterpart to a benign lipoma. They are the second most common type of soft tissue sarcoma. Liposarcoma represent 20-30% of adult soft tissue tumours and its abdominal localization occurs only in 5% of cases. In abdomen usually retroperitoneal or mesenteric. In the retroperitoneal space and in the mesentery there is a connective tissue containing organs and structures defined as extra peritoneal. They are asymptomatic, but few present with abdominal mass and pain, fatigue, nausea, vomiting. They infiltrate adjacent organs and cause intestinal obstruction, intestinal ischaemia-perforation, hydronephrosis, ureteric fistula and even aortic rupture[5]. Liposarcomas do not discriminate between genders and can be seen in all age groups. They are often seen between 50 and 70years of age.

INTRODUCTION

Liposarcomas are typically found in adults and are rare in children. Clinical presentation varies accordingly to the tumour location, usually related to a mass when involving the subcutaneous and extremities and a vague discomfort when intra-abdominal or intrathoracic.

In 2013, the WHO published the revised soft tissue tumours classification-4th edition[7]. Based on this classification, the soft tissue tumours depending on their biological behaviour, soft tissue tumours are classified as:

-benign: lipoma (usually does not recur)

-Intermediate- locally aggressive: well differentiated Liposarcomas (it recurs often but does not metastasize);

-Intermediate-rarely metastasizing: solitary fibrous tumor (it recurs often and may metastasize in <2% cases);

-malignant: dedifferentiated liposarcoma (it is common and has high risk of metastases)[7-9]

Thought to be originated from mesenchymal cells, they are classified histologically into five types:

1. Well-differentiated

2. Myxoid

3. Round cell/ de-differentiated

4. Pleomorphic

5. Mixed

Location of liposarcoma is usually seen in the extremities (75%), less commonly seen in the retro peritoneum, groin or elsewhere.

One third of well-differentiated liposarcomas recur locally, while the mesenteric, bone and pulmonary[10]. The mesentery is a frequent avenue of spread for malignant neoplasms through the peritoneal cavity and between the peritoneal spaces and the retroperitonium[11].

Case report: A 61-year old male patient presented with right lumbar pain and abdominal distension at outpatient department of Suri Seri Begawan Hospital at Kuala belait, Brunei. On his examination revealed distended abdomen with hard mass at right side of abdomen. Ultrasonogram showed intra and retroperitoneal mass, increased intraabdominal fat echogenicity in right side of the abdomen mostly retoperitonium and intraperitoneal invasion. Bowel loops collapsed which seen displaced to left abdomen. Contrast enhanced computed tomography (CT) demonstrated a mix density lobulated and well defined mass lesion (having fat, soft tissue density and calcifications) is seen at abdomen extending from epigastrium to upper part of pelvic cavity, measuring about 29.2 x 26.0 x 15.7cm. Right adrenal gland is not visualized. Right kidney, superior mesenteric artery and vein (SMA & SMV) and bowel loops are compressed and displaced laterally. Pancreas is compressed and displaced to left side. No organ or abdominal wall invasion is seen. No bone destruction is seen (Fig 1 & 2). MRI findings revealed a huge lobulated, retroperitoneal mass composed of mostly fatty and partly soft tissue components, occupying almost whole abdomen with relative sparing of true pelvis and LIF. Soft tissue components of the lesions show moderate heterogeneous enhancement with internal non-enhancing areas of necrosis. The mass compressing and displacing pancreas and bowel loops left side and anteriorly. Right kidney is displaced downward and laterally. Right adrenal gland is not visualized. The impression is huge retroperitoneal mass, features likely liposarcoma.

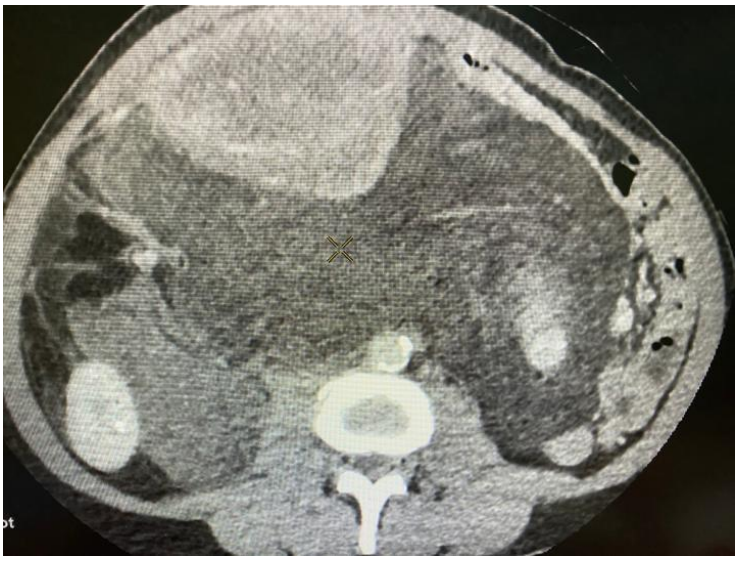

Figure No. 1: Abdominal CT scan

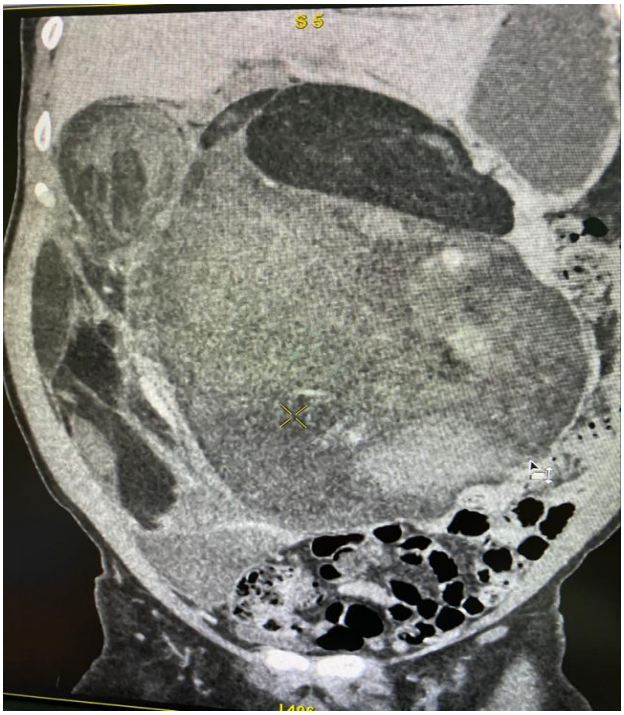

Figure No. 2: Abdominal CT scan

DISCUSSION

In case of intra-abdominal mass is detected, surely abdominal compartment syndrome (ACS) should be considered. If vital signs, pulmonary function tests (PFT) and value of CVP are

abnormal, intra-abdominal pressure should be measured. Our findings mentioned above were not observed. Cases that have reached giant size and originating from the omentum are rare to nonexistent in literature [12].

A physical exam is the first step in the liposarcoma diagnosis process. Lumps that are 5cm or larger and deep-seated, firm and fixed to underlying structures are usually considered suspicious. Imaging test are X-rays, USG, CT scan, MRI are the next steps.

In CT scan the tumor usually

- solid: attenuation +20 HU
- mixed: areas of less than -20 HU to -100HU and +20HU
- pseudocystic: homogeneous density between -20 and +20HU
- Points favouring a liposarcoma over a lipoma include significant amounts of soft tissue within the fatty mass, poor definition of adjacent structures, evidence of infiltration or invasion of mediastinal structures and calcification.

In MRI

- Low grade lesions (atypical lipomas) are almost entirely fat signal have thick septa, enhancement or evidence of local invasion[13].
- Higher grade lesions are devoid of fat and have appearance similar to other sarcoma.
- Lipoma
- Fibrosarcoma
- Angiomyolipoma
- Adrenal myelolipoma
- Malignant fibrous histiocytoma.
- Leiomyosarcoma.

CONCLUSION

Surgery is the treatment for primary liposarcoma that have not yet spread to other organs. Most cases a surgeon will remove the tumor, along with a wide margin of healthy tissue around the tumor. With the goal of leaving the area free of disease and preventing the tumor from recurrence. Complete surgical removal of tumours within the abdomen is difficult, in part because of the difficulty in getting margins of normal tissue. Adjuvant radiotherapy and chemotherapy are used in patients in whom clear surgical margins have not been attained.

Prognosis depends on disease subtype and location. Survival rates usually five to ten years. If the tumour within abdomen long term is less common because it is difficult for the surgeon to completely remove the tumor.

Routine follow-up will continue throughout the patient's life. It usually includes a physical examination and imaging studies such as x-ray, USG, CT scan and MRI.

Conflict of interest: None.

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