Giant Retroperitoneal Lipoma

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Abstract

Lipomas are mesenchymal tumours characterized by the abnormal proliferation of adipocytes. Retroperitoneal benign lipomas are extremely rare and represent about 2.9% of all primary retroperitoneal tumours. We report a 63 yr old male who presented with abdominal distension since 2 months, computed tomography of abdomen and pelvis showed retroperitoneal tumour of size 18x13x15 cm with multiple septae and a mural nodule. Ultrasound-guided fine needle biopsy was performed to exclude malignancy, which showed features of lipoma. Laparotomy and complete excision of 13kg tumour was done. Histology report showed benign lipomatous cells without atypia. Patient discharged without any post operative complication.

Key words: retroperitoneal lipoma, laparotomy.

Introduction

Primary retroperitoneal tumors are rare and have great histological variety. They may originate from the retroperitoneal adipose, muscle, connective, lymphatic and nerve tissue, and from the urogenital tract [1]. About 80% of the tumors in the retroperitoneal cavities are malignant neoplasms. Retroperitoneal benign lipomas are extremely rare and represent about 2.9% of all primary retroperitoneal tumors and this diagnosis should be made with caution because most lesions designated as retroperitoneal lipoma are lipoma-like areas of an under sampled, well-differentiated liposarcoma. They must be carefully differentiated from liposarcomas of low-grade malignancy, in order to provide the correct treatment and postoperative follow-up[2] . Malignant change of lipoma to liposarcoma is virtually unknown, these benign lesions may grow to large proportions but have no propensity to turn malignant.

Case Report

A 63 year old male presented to surgery out-patient department with history of progressive abdominal distension since 2 months. He also gave history of weight loss and loss of appetite. There was no history of nausea, vomiting, altered bowel habits, fever, jaundice and previous abdominal surgeries. He is a known hypertensive since 1 year on regular treatment. On examination vitals were stable, with pallor and bilateral pitting pedal oedema, abdomen was distended (Figure 1), umbilicus central and everted, movements of all quadrants reduced with respiration. On palpation, abdomen was soft, non-tender, no obvious mass felt. On percussion, dullness was present around the umbilicus with flanks being resonant, no shifting dullness, bowel sounds normal.

Routine blood investigations were within normal

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limits including Alpha-feto protein, Carcio-embryonic antigen and Thyroid function tests. Ultrasonography of abdomen and pelvis showed-hyperechoic poorly defined lesion in the lower abdomen with no evidence of collection within the lesion, bowel loops were displaced by the lesion. Impression was given as large echogenic lower abdominal lesion? lipoma. Computed Tomography of abdomen and pelvis (Figure 2) showed-large well defined encapsulated retroperitoneal hypodense lesion measuring 18x13x15 cm with multiple septae and a mural nodule noted in abdomen with extension into pelvis. The septae show mild enhancement, adjacent bowel loops were displaced. Visualised Aorta and inferior vena cava (IVC) show normal course and calibre, above features likely suggestive of retroperitoneal lipoma/ ?liposarcoma. USG guided FNAC of intra-abdominal mass showed features of lipoma.

Patient was taken up for surgery with diagnosis of retroperitoneal lipoma. On Exploration retroperitoneal tumor of size 40x 38 cm occupying the left side of abdomen, descending colon and small intestine were pushed to right side of abdomen(Figure 3), superiorly tumor was abutting the diaphragm, and inferiorly tumour was extending into the pelvis with encasement of left iliac vein (Figure 4). The tumour was excised completely with blunt and sharp dissection. Tumour measured 40x 38 cm and weighed 13 kg (Figure 5). Consistency was soft throughout except for a small part inferiorly which was firm. Histo-pathological report showed features of lipoma, with no atypical cells or evidence of malignancy (Figure 6). Patient tolerated the procedure well without any post operative complications and discharged on post-operative day 10.

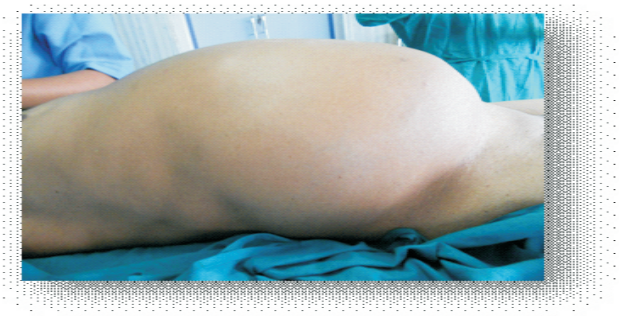

Figure 1. Clinical photograph

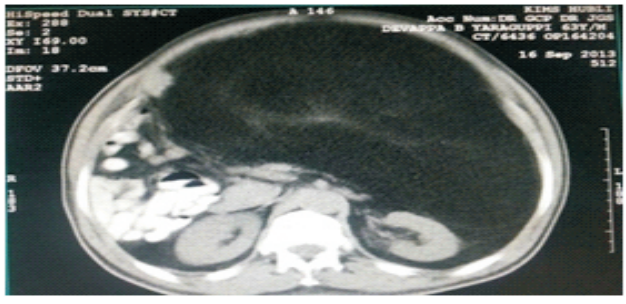

Figure 2. Computed tomography-abdomen showing large well defined retroperitoneal hypodense lesion

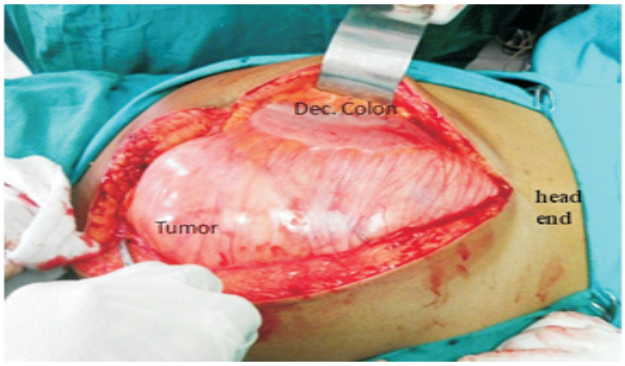

Figure 3. Operative photograph- Tumour displacing bowel loops to the right

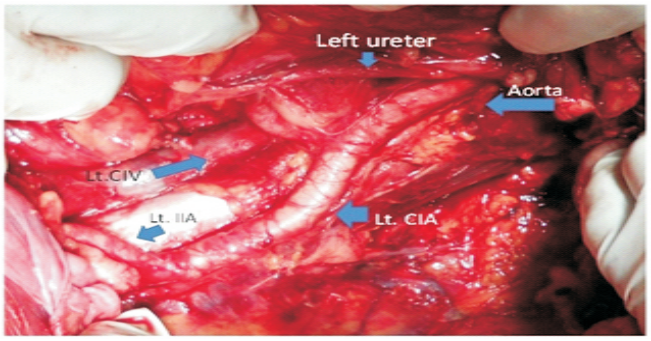

Figure 4: Operative photograph showing tumour relations, after excision. (CIA- common iliac artery, IIA- internal iliac artery, CIV- common iliac vein)

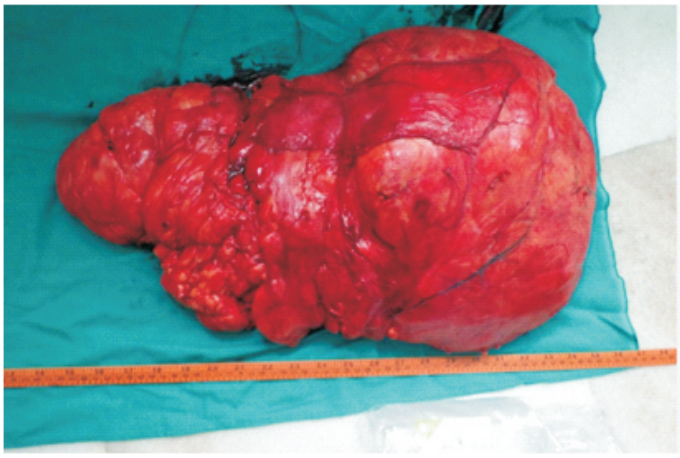

Figure 5. Excised specimen measuring 40X 38 cm and weighing 13 kg

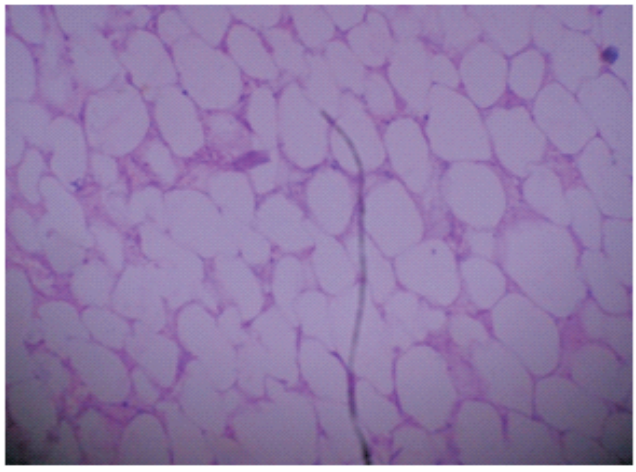

Figure 6. Microscopic photograph showing mature tumour cells without any atypia

Discussion

Lipomas are the most common benign tumours of the adipose tissue among adults. According to histo-pathological findings, they are subclassified into conventional lipoma, fibrolipoma, angiolipoma, fusiform cell lipoma, myelipoma and pleomorphic lipoma. Primary retroperitoneal tumors are rare and have great histological variety, they may originate from the retroperitoneal adipose, muscle, connective, lymphatic and nerve tissue, and from the urogenital tract [1]. Around 80% of retroperitoneal tumors are malignant and of these, liposarcoma is the most frequent histological type, representing 45% of the cases [3]. Lipomas are a benign variant of liposarcomas located in the peritoneal cavity, and especially in the retroperitoneum [4,5]. Although retroperitoneal lipomas are relatively more common in adults, they can occur in infants and small children. They may affect both sexes, but there is a greater predisposition for females. When lipomas affect the retroperitoneum, they attain considerable dimensions, generally presenting diameters greater than 15 cm, due to their unhurried growth [6]. Eresué et al [7] described two cases with dimensions of 15 x 40 and 13 x 18 cm,

respectively, and attributed the size of the tumors to their characteristics of slow and progressive growth. In the patient of the present report, the same characteristics were observed, in that the lesion had large dimensions(40 X 38 cm).

On ultrasound, lipomas appear as oval masses with well-defined regular margins and a hyperechoic echo structure. Thin fibrous septa may be present within the lesion, and the color Doppler examination shows no intra or perilesional vascularization. A well-differentiated, liposarcoma is usually hyperechoic and may be indistinguishable from a lipoma; however, Doppler ultrasonography studies reveal that a liposarcoma is more vascular than a lipoma. In the patient of the present report, USG demonstrated the presence of a hyperechoic poorly defined lesion, with no evidence of collection within the lesion, bowel loops are displaced by the lesion. Echogenicity suggestive of adipose tissue. CT presents greater diagnostic precision than USG, as well as permitting better assessment of the possibilities for surgical resection. When comparing the tomographic appearance of lipomas and liposarcomas, it is observed that the former are well-deliniated, voluminous and hypodense tumors that generally extend beyond the medial sagittal plane, they are sublobular because of the fine, elongated fibrous intratumoral septa. Because of the presence of fatty tissue, the muscle fasciae become clearer than in normal individuals, and in most cases cleavage planes are found between the tumour and adjacent organs. This characteristic is less evident in liposarcomas [7]. The density of retroperitoneal lipomas is generally similar that of adipose tissue [7]. Liposarcomas, in their turn, present greater density and are more heterogeneous, interspersing areas with fatty tissue density and areas of muscle fibre tissue [7]. The intra-lesion septa are thicker, and there is also the formation of 7 to 8 cm nodules of high tomographic density, disseminated across a hypodense base [7]. Microscopically, lipomas consist of multivacuolated cells, small eosinophilic cells, and univacuolated adipocytes. The treatment of retroperitoneal lipomas is eminently surgical [10]. In most cases, surgical resection is easily performed because the capsule that surrounds the tumour presents a clear cleavage plane. When indicating surgical resection for retroperitoneal lipoma, the possibility of liposarcoma always needs to be considered, in order to provide the correct treatment and postoperative follow-up. Differential histopathological diagnosis with liposarcoma may be problematic, especially for tumours with grade 1 malignancy, which are denominated lipoma-like [10]. Pathological examination for mitotic activity, cellular atypia, necrosis, and invasion allows for definitive diagnosis. The radicalness of the surgical resection has a direct relationship with tumour relapse [8]. We believe that in patients who are suspected of having retroperitoneal lipomas, radical resection of the lesion should always be performed if possible, thus reducing the possibility of locoregional relapse if the histopathological examination demonstrates the presence of liposarcoma. They also need careful follow-up because they often recur and may undergo malignant transformation. The recurrence rate for lipomas is less than 5%. But deep lipomas like retroperitoneal lipomas have greater tendency to recur, presumably because of difficulty of complete removal [11].

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