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CASE STUDY

GIANT RETROPERITONEAL LIPOMA : A CASE REPORT OF A RARE ENTITY

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ABSTRACT: Lipomas are the most common soft tissue tumors in adult. They commonly arise in extremities. Retroperitoneal lipoma is an extremely rare benign mesenchymal neoplasm. Clinically, patients present with lump in the abdomen along with pressure symptoms such as pain abdomen. Herein, we report a rare case of giant retroperitoneal lipoma in a 25 year old young female, who presented with lump and pain abdomen since 3 months.

KEYWORD: Retroperitonealtumors, Young female, Abdominalmass, Lipoma, Mesenchymal Neoplasm

INTRODUCTION :

Lipomas are the most common benign soft tissue tumors in adult. They commonly arise from sub-dermal tissue of trunk and peripheral extremities and are composed of lobules of mature adipocytes.[1] Their etiology still remains unclear. Primary retroperitoneal tumor constitutes less than 1% of all the neoplasms diagnosed, out of which 80% are malignant.[2]These retroperitoneal soft tissue tumors originate from adipose, muscle, connective, lymphatic and nerve tissue.[3] Liposarcomas are the most common retroperitoneal sarcomas constituting about 45 % of all the cases.[4]Retroperitoneal location of lipoma is extremely rare. Although CT scan or MRI are helpful in preoperative diagnosis of lipoma, but it is difficult to differentiate low grade liposarcoma from lipoma. Herein, we report a rare case of large retroperitoneal lipoma in a 25 year old female.

CASE REPORT:

A 25-year-old female presented to the surgical outpatient department with complaints of pain and swelling lower abdomen since three months. On examination, an ill defined mass of size 10 x 8 cm was palpated in the right iliac fossa, however, its borders were not felt separately. There was no history of vomiting, fever, haematemesis or malena. Her bowel and bladder habits were normal. Her hematological and biochemical parameters were within normal limits. Ultrasonography abdomen revealed a large heterogenous lesion of size 12x7x3.5 cm in the right iliac fossa displacing the bowel loop antero-superiorly and abutting the right lateral border of urinary bladder.On Contrast Enhanced Computed Tomography (CECT)scan abdomen, a well defined lesion was seen in the right iliac fossa measuring 12x10x 9.6 cm with thin capsule and imperceptible wall thickness containing

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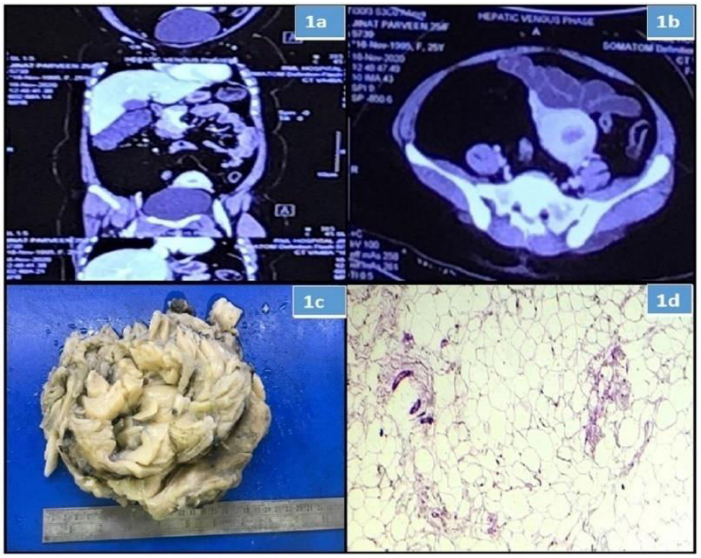

Figure 1 : 1a,1b) CECT : A well defined mass withthin capsule and imperceptible wall thickness containing homogeneous fat that displaces the abdominal contents. Solid components are not appreciated. c) Gross specimen reveals homogeneous, grey- yellow fibrofatty mass. d)Lobules of mature adipose tissue with interspersed few blood vessels. (H & E, 200 X).

homogeneous fat in retroperitoneum. Lesion was displacing caecum superiorly, uterus and right ovary towards left side. Medially it was abutting and causing medial displacement of right ureter. Laterally it was abutting lateral abdominal wall. Posteriorly it was abutting iliac and psoas muscles. There was no post-contrast enhancement and internal calcification in the lesion. Hence, a possibility of retroperitoneal lipoma was given (Fig1a,1b). Ultrasonography (USG) guided biopsy of the lesion was performed which on histopathology showed fibro-adipose tissue with nerve bundles only. The swelling was gradually increasing in size that started producing distension of the abdomen and stretch marks. Patient underwent exploratory laparotomy following which a mass of size 15x15 cm was excised. Intra operatively, caecum and appendix was pushed medially and upward in sub-hepatic location. Right gonadal vessels appeared to adhere to the mass. There were no palpable lymph nodes and peritoneal nodules. Post excision, specimen was sent to histopathology department for further examination. On gross examination, mass was fibrofatty, yellow in color measuring 21x15x8cm. Serial slicing of the mass was also fibro-fatty. No heterogenic areas were seen (Fig1c). Multiple sections from the mass were examined which revealed lobules of mature adipose tissue only (Fig 1d). Overall, a final diagnosis of retroperitoneal lipoma was given. Post-operative period was uneventful. On routine follow up, patient is doing well and no recurrence is seen.

DISCUSSION:

Primary retroperitoneal tumors are uncommon. Retroperitoneal tumors may arise from the underlying adipose tissue, nerve tissue, muscle, connective tissue, lymphatics and from the urogenital tract.[3] Based on the tissue of origin, these tumors have varied histomorphological types. Soft-tissue sarcomas has an incidence rate of 4 per 100,000 cases, of which liposarcoma constitutes about one third of all the cases.[5]Lipomas are the benign counterpart of liposarcoma. Lipomas in retroperitoneal location are extremely uncommon. Literature for previous cases of retroperitoneal lipoma was searched using pubmed and google scholar with keywords such as retroperitoneal lipoma, giant lipoma. Till date, in english literature, only 20 cases of retroperitoneal lipomas in adult have been reported.[6]Cases of retroperitoneal lipomas are more commonly seen in adult, but can be seen in all age groups.[6] Most cases reported are seen in females. Our case is the 21st case of giant retroperitoneal lipoma.

Lipoma arising from subcutaneous tissue have shown association with obesity, hypercholesterolemia and trauma in some cases, however, no such association is seen in retroperitoneal lipoma.[7,8,9] Lipoma due to their slow but progressive growth usually attain size of more than 15 cm when they affect retroperitoneum.[10] Clinically, these tumor become symptomatic only when they causes obstruction or

shift of the adjacent viscera. Retroperitoneal lipoma usually presents with non-specific features due to their slow rate of growth. Patient usually presents with symptoms of pain abdomen and palpable abdominal mass. In our case also patient had similar presentation. [10]

It is difficult to differentiate low grade liposarcoma from a benign lipoma. On CT and MRI scan, liposarcoma usually show greater density and more heterogenous areas, whereas, retroperitoneal lipoma have density similar to that of adipose tissue. [6]

Grossly, lipomas are yellow, fibrofatty, encapsulated tumor with interspersed fibrous septa which gives a multi-lobed appearance to the lesion. Low grade liposarcoma also appear similar to lipoma. Histopathology is the gold standard for diagnosing lipoma. Lipoma have varied histological types such as fibrolipoma, angiolipoma, conventional lipoma, fusiform cell lipoma, myelolipoma and pleomorphic lipoma.[1] Conventional lipoma vs low grade liposarcoma , especially, if the tumor is large poses a diagnostic challenge to the pathologist. However, necrosis, atypia, hyperchromasia, pleomorphism, irregular nuclei, and invasion of the surroundings tissue are the features favoring diagnosis of liposarcoma over lipoma.[11]

Treatment of giant retroperitoneal lipomas is surgical excision. Since preoperatively, well differentiated liposarcoma cannot be ruled out completely. Therefore during surgery, if any suspicion regarding its infiltrative growth or aggressive behaviour is suspected, wide excision of the tumor with negative margin should be carried out as liposarcoma carries poor prognosis over lipoma.[5]

CONCLUSION:

In conclusion, giant retroperitoneal lipomas are extremely rare tumor. Clinically, due to their large size they present with pressure symptoms. Due to their rarity, these tumors poses a diagnostic challenge to both clinicians and pathologist. However, histopathology is the gold standard for diagnosis. An accurate diagnosis is essential for deciding the correct modality of management and patient prognosis.

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