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Giant Retroperitoneal Lipoma: a Case Report and Review

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Case Report

Abstract: Retroperitoneal lipomas have remained the essentially rare tumors seen in clinical practice. There are very few reported cases in surgical literature worldwide.**Case:** The authors report a case of giant retroperitoneal lipoma in a 35-year-old female, with a history of pain and abdominal distension. Abdominal ultrasonography and CT scan of abdomen showed a large mass located in the retroperitoneal space. Laparotomy showed a large encapsulated tumor measuring 40 x 30 x 10 cm and weighing 8kg. The histological study revealed a benign neoplasm of fatty cells. The patient had a good postoperative performance status. **Conclusion:** Lipomas should be considered in the differential diagnosis of a solid tumor in the retroperitoneal space and treatment of retroperitoneal lipomas is eminently surgical.

Keywords: Giant retroperitoneal lipoma.

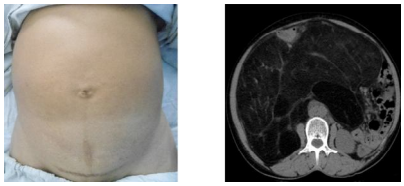
1. Introduction

Lipomas are exceedingly rare in the retroperitoneum, 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. It is generally understood that the deeper and more centrally located a fatty mass resides, the more likely it is to be malignant. Malignant change of lipoma to liposarcoma is virtually unknown; these benign lesions may grow to large proportions but have no propensity to mutate [1].

The objective of the present, discuss and review case is to present a case of a retroperitoneal lipoma of large proportions in a 35-year-old female patient treated by surgical excision, who had a good postoperative performance status.

2. Case Report

A 35-year female presented with 6 months history of pain in abdomen & progressive distension of abdomen. There was no associated history of constitutional symptoms, altered bowel habits, or symptoms suggestive of chronic liver disease. Previous history of tubal ligation and abdominal hysterectomy was present. Patient was normotensive and general physical examination was unremarkable. Abdomen was distended; scar mark of hysterectomy and tubectomy was seen. On palpation, abdomen was soft, non-tender, no organomegaly. An ill-defined, soft, mass was palpable in all quadrants. Percussion note was dull on right side of the abdomen and there was no evidence of free fluid in abdomen. [figure 1]

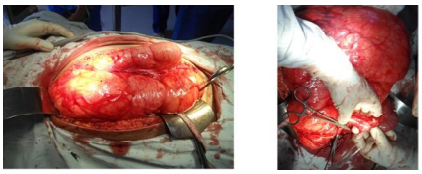


(a) (b)

Figure 1. *Gross abdominal distention (a) and CT scan abdomen showing diffuse lipomatosis of retroperitoneum (b).*

Routine investigations including hemoglobin, complete blood counts, blood glucose, blood urea nitrogen, serum creatinine, transaminases, proteins, uric acid were in normal range. Lipid profile revealed total cholesterol of 154 mg/dl, HDL 58 mg/dl, LDL 78 mg/dl and serum triglycerides 90 mg/dl. Electrocardiograph, x-ray of chest and urine analysis was normal. Ultrasonography of abdomen revealed - hypo echoic shadowing seen throughout abdomen- suggestive of abdominal lipomatosis. Computed tomography of abdomen showed well defined lobulated lesion (-90 HU) seen predominantly involving right retroperitoneal space. The lesion was causing mass effect and displacing small bowel coils to left side and right kidney anteriorly. Lesion was causing displacement of caecum, ascending colon anteromedially and that of coeliac and superior mesenteric artery laterally to left side. Findings were s/o Diffuse retroperitoneal lipomatosis. [figure 1]

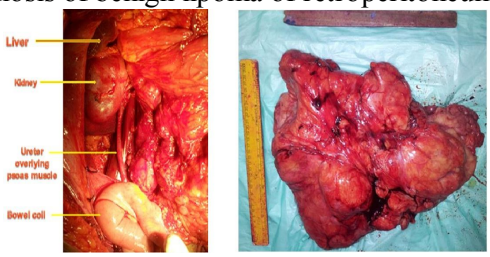
The patient was subjected to laparotomy by right paramedian incision. Retroperitoneum was found to be occupied, from diaphragm to pelvis, by a huge mass of encapsulated fat. Small-caliber vessels were seen on its surface.



(a) (b)

Figure 2. *Lipoma occupying right retroperitnoeum (a) and Division of surface vessels over lipoma (b).*

Bowel loops as well as right ureter were displaced to left side. Liver did not show any gross features of fatty infiltration. Very evident cleavage planes were seen, separating it from the right colon, right kidney, ureter, vena cava, aorta and iliac vessels. The capsule had weak adherence to the retroperitoneal tissue and in the posterior region, arterial-venous pedicle of greater caliber which went inside the psoas muscle were found, which were secured, ligated and cut. About 8 kg of solid fat was removed. Colon and right ureter were kept back at their anatomical position. The patient had an uneventful post-surgery recovery. Histopathological examination confirmed the diagnosis of benign lipoma of retroperitoneum.



(a) (b)

Figure 3. *Post specimen removal intra operative photograph (a) and photograph of gross specimen (b).*

3. Discussion

Primary retroperitoneal tumors are rare and have great histological variety. They may originate from the retroperitoneal adipose [2], muscle, connective, lymphatic and nerve tissue, and from the urogenital tract [2], [3]. Malignant primary retroperitoneal tumors represent less than 1% of all neoplasms diagnosed [4]. Around 80% of retroperitoneal tumors are malignant and of these, liposarcoma is the most frequent histological type, representing 45% of the cases[2], [5], [6]. Although soft-tissue sarcomas are more common among adults, retroperitoneal liposarcomas represent only 0.1% to 0.2% of all malignant neoplasms [7]. Lipomas are a benign variant of liposarcomas located in the peritoneal cavity, and especially in the retroperitoneum. They are exceptionally rare, judging by the scarcity of reports published on this matter [8], [9].

When lipomas affect the retroperitoneum, they attain considerable dimensions [10], generally presenting diameters greater than 15 cm, due to their unhurried growth [11]. ERESUÉ et al [12] 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 also observed, in that the lesion had large dimensions (40 x30x 10 cm) and weighed 8 kg.

Because of the insidious growth of retroperitoneal lipomas, they have non-specific features. Abdominal pain and the presence of a palpable abdominal mass are the most common findings [7], [11]. In the majority of cases, the pain is reported to be the lumbar region. USG and computerized tomography (CT) of the abdomen have great importance in the diagnosis and local evaluation of retroperitonealtumors [6]. In the patient of the present report, USG demonstrated the presence of a voluminous hypoechoic non-homogenous tumor with an irregular outline, which displaced the neighboring organs and had 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-delimited, 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 tumor and adjacent organs. This characteristic is less evident in liposarcomas [12]. The density of retroperitoneal lipomas is generally similar that of adipose tissue [12]. Liposarcomas, in their turn, present greater density and are more heterogeneous, interspersing areas with fatty tissue density and areas of muscle fiber tissue [12]. 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 [12].

The treatment of retroperitoneal lipomas is eminently surgical [9]. In most cases, surgical resection is easily performed because the capsule that surrounds the tumor 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 [13]. In this case the radicalness of the surgical resection has a direct relationship with tumor relapse [7].

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.

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