GIANT RETROPERITONEAL LIPOMA: a case report*

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ABSTRACT – ***Background*** – Retroperitoneal lipoma is an extremely rare neoplasm. ***Aims*** – The authors report a case of giant retroperitoneal lipoma in a 32-year-old white female, with a history of pain and an abdominal mass over a 2-year period. Total abdominal ultrasonography and barium enema showed a large mass located in the retroperitoneal space behind the ascending colon. Laparotomy showed a large encapsulated tumor measuring 20 x 13 x 10 cm and weighing 3.400 g. The histological study revealed a benign neoplasm of fatty cells. ***Conclusion*** – The patient remains well 17 years after surgery, without recurrentce of the disease.

HEADINGS – Retroperitoneal space. Lipoma, surgery.

INTRODUCTION

Primary retroperitoneal tumors are rare and have great histological variety. They may originate from the retroperitoneal adipose[7], muscle, connective, lymphatic and nerve tissue, and from the urogenital tract[12, 13]. Malignant primary retroperitoneal tumors represent less than 1% of all neoplasms diagnosed[3].

Around 80% of retroperitoneal tumors are malignant and of these, liposarcoma is the most frequent histological type, representing 45% of the cases[6, 12, 19]. Although soft-tissue sarcomas are more common among adults, retroperitoneal liposarcomas represent only 0.1% to 0.2% of all malignant neoplasms[9].

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[11, 17]. Retroperitoneal lipomas must be carefully differentiated from liposarcomas of low-grade malignancy, in order to provide the correct treatment and postoperative follow-up[18].

The objective of the present is to present a case of retroperitoneal lipoma of large proportions in a 32-year-old patient treated via surgical excision, who does not present any signs of relapse 17 years after the intervention.

CASE REPORT

A 32-year-old white woman had noted the appearance of a painless tumor in the region of the right iliac fossa (RIF) and right flank (RF) 2 years previously, which had presented significant growth over the past 6 months. Three months before being examined, she began to complain of abdominal colics at that location, accompanied by alteration of her intestinal habit towards constipation. She denied having blood losses upon evacuation and weight loss. The physical examination was normal except for the inspection of the abdomen in dorsal decubitus, in which bulging was now observed in the region of the RIF and RF, which extended from the medial line to the left side of the abdomen. Palpation showed the presence of a mass at this location that was mobile and painless and had fibroelastic consistency.

Abdominal ultrasonography (USG) revealed the presence of a voluminous retroperitoneal tumor that displaced the right colon anteriorly and medially. This displacement began close to the lower pole of the right kidney, which had normal characteristics. An opaque enema showed the cecum and right colon displaced by the tumor in an anterior and medial direction while not, however, invading the colon wall (Figure 1).

With a diagnosis of early tumor of the retroperitoneum, the patient underwent surgery. In the exploratory laparotomy, which

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FIGURE 1 – Opaque enema (profile), revealing the displacement of the ascending colon

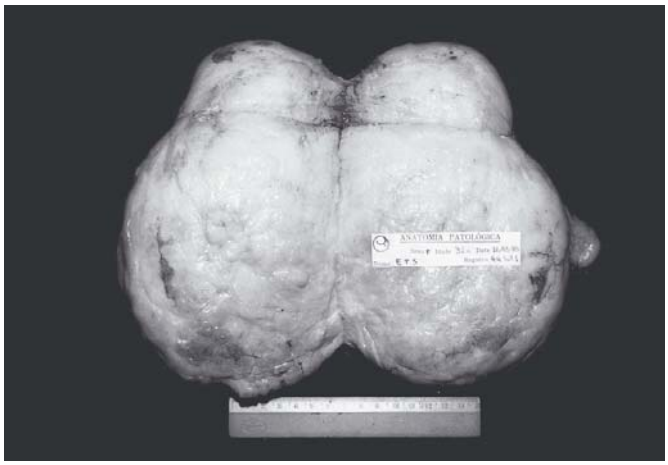

FIGURE 2 – Retroperitoneal lipoma seen via its internal surface after opening up the specimen

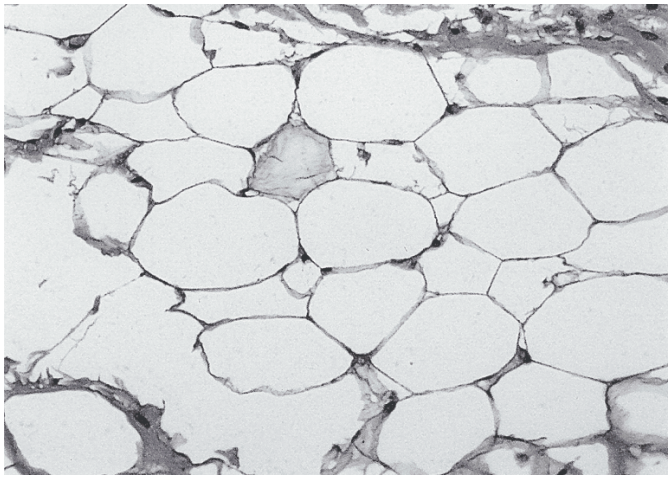

FIGURE 3 – Photomicrograph showing adipose cells of mature appearance HE 400x

confirmed the findings of the USG and opaque enema, the displacement of the right colon to the left was noted from the peritoneal reflection, due to presence of a retrocolic tumor. After opening the peritoneum along the reflection, a solid encapsulated lesion of dimensions 20 x 13 x 10 cm was found (Figure 2), which presented very evident cleavage planes 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 also to small-caliber vessels on its surface. In the posterior region, and arterial-venous pedicle of greater caliber was found, which went inside the psoas muscle.

The anatomopathological examination demonstrated the presence of a tumor weighing 3,400 g, with an embossed surface of yellowish-rosy color interspersed with areas of striated appearance with a white coloration. The histological sections demonstrated a tumor consisting of typical adipose cells of mature appearance, laid out in a compact arrangement, sometimes with intervening septa of vascular collagen fiber tissue, without signs of malignancy. The histopathological diagnosis was lipoma (Figure 3).

DISCUSSION

Lipomas are the most common benign tumors of adipose tissue among adults[15]. In the same way as for liposarcoma, they preferentially affect the extremities, and it is rare to find them located in the abdominal cavity or retroperitoneum[5, 15]. They are subclassified according to their histopathological characteristics, into conventional lipoma, fibrolipoma, angiolipoma, fusiform cell lipoma, myelolipoma and pleomorphic lipoma[15]. When lipomas occur in a retroperitoneal location, they mostly have renal origin and are classified as angiolipomas[1].

Retroperitoneal lipomas of extra-renal, mesenchymal neoplastic origin have rarely been described in the literature[14]. Such tumors

can occur in any age group, although the majority of cases occur among individuals aged over 50 years. It has been seen that these lesions may affect both sexes, but there is a greater predisposition for females[4]. In a recent review with 13 cases studied, CAVAZZA et al.[4] verified that 10 were females and their average age was years (range: 22 to 72 years).

When lipomas affect the retroperitoneum, they attain considerable dimensions[20], generally presenting diameters greater than 15 cm, due to their unhurried growth[4]. ERESUÉ et al.[5] 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 (20 x 13 x 10 cm) and weighed 3400 g.

Macroscopically, lipomas are encapsulated tumors with yellowish-rosy coloration, interspersed with fibrous septa of whitish coloration, which can give the lesion a multi-lobed appearance[5]. The same delimited appearance can be found among liposarcomas of low-grade malignancy (grade I). Nonetheless, liposarcomas of high-grade malignancy (grades III and IV) present a more evident locoregional infiltrative appearance, which often makes curative surgical resection difficult[9]. In the case described, the tumor was delimited by a very evident capsule with blood vessels on its external surface. The tumor had a clear cleavage plane with the right kidney and ureter and, even though the right colon was displaced anteriorly and medially, it did not invade the colon wall. These characteristics allowed differential diagnosis with angiolipomas of renal origin[1], which are clinically more common findings.

Differential histopathological diagnosis with liposarcoma may be problematic, especially for tumors with low-grade malignancy (grade I), which are denominated "lipoma-like"[10]. Benign tumors are fundamentally composed of typical mature adipose cells, laid out in a compact arrangement, sometimes with intervening septa of collagen fiber tissue. Mitotic activity non-existent. In contrast, in well-differentiated liposarcomas, the adipose cells present varying sizes, solitary or multiple hyperchromatic nuclei, and eosinophilic cytoplasm with the presence of vacuoles. Mitoses are generally more common in more undifferentiated lesions, and in 25% of the cases fatty necrosis and multinucleated histiocytes are present[10].

Immunohistochemical investigation of the p53 protein, ki-67 and DNA ploidy has recently been studied as a prognostic factor in soft-tissue sarcomas, although in retroperitoneal sarcomas it appears that the markers do not have the same usefulness when compared with lesions of the extremities[16].

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[4, 9]. In the majority of cases, the pain is reported to be the lumbar region. However, compression of the colon, as in the patient we operated on, may provoke abdominal colics.

USG and computerized tomography (CT) of the abdomen have great importance in the diagnosis and local evaluation of retroperitoneal tumors[19]. 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. Nonetheless, the examination did not show the possibility of colon wall attack with certainty. The utilization of Doppler may demonstrate the small blood flow inside the tumor that results from the greater presence of fatty tissue and vascularized septa in comparison with liposarcomas[18].

CT presents greater diagnostic precision than USG, as well as permitting better assessment of the possibilities for surgical resection. ERESUÉ et al.[5], when comparing the tomographic appearance of lipomas and liposarcomas, 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[5]. The density of retroperitoneal lipomas is generally similar that of adipose tissue[5].

Liposarcomas, in their turn, present greater density and are more heterogeneous, interspersing areas with fatty tissue density and areas of muscle fiber tissue[5]. 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[5].

Unfortunately, at the time that the patient of the present report was submitted to surgical intervention (1985), we did not yet have computerized tomography available. Nevertheless, it has to be emphasized that abdominal ultrasonography can, with precision, reveal the localization of the neoplasm and demonstrate the possibility that the tumor may be composed of fatty tissue.

The use of percutaneous biopsies is controversial because, if it is a case of liposarcoma, they may cause local dissemination via the implanting of neoplastic cells along the pathway of the puncture[9]. Some authors have recommended that[7], when faced with the possibility of primary retroperitoneal tumor, radical surgical removal would be more appropriate or, when this is not possible, wedge-shaped biopsy during laparotomy[9]. Since the possibility of liposarcoma could be dismissed before the surgical intervention, we chose, just like LUCAS et al.[10], not to perform percutaneous biopsy as a preoperative diagnostic method.

The treatment of retroperitoneal lipomas is eminently surgical[17]. In most cases, surgical resection is easily performed because the capsule that surrounds the tumor presents a clear cleavage plane with

neighboring structures. In the patient that we followed up, the tumor was found to be enclosed by a clear and thick capsule that had weak adherences to the neighboring organs and tissues. The blood vessels on the encapsulated surface were identified and ligated under direct view. The ligature that required most attention was performed in the posterior region of the tumor, and such attention was due to the presence of greater-caliber vessels that went inside the psoas major muscle. In patients with retroperitoneal liposarcomas, the absence of a well-defined capsule causes a need for removal of viscera and tissue affected by neoplasia, with the aim of diminishing the possibility of locoregional relapse[9].

When indicating surgical resection for retroperitoneal lipoma, the possibility of liposarcoma always needs to be considered. In this case the radicalness of the surgical resection has a diredt relationship with tumor relapse[9]. LUCAS et al.[10] verified that, even among well-differentiated tumors, the relapse rate is 60% of the cases when they are treated via marginal excision. The same authors observed a lower relapse rate (11%) from radical resection. LOPES-FILHO et al.[9] observed five relapses (71.4%) out of seven patients the followed up. These authors highlighted that the relapses presented malignancy that was more aggressive than in the primary tumor and drew attention to the possibility of variation from the histological standard in the case of relapsed retroperitoneal liposarcoma.

There is no definitive evidence that postoperative radiotherapy or chemotherapy might favorably modify the clinical course of this type of malignant neoplasm[18]. Radiotherapy has been utilized in some patient series merely as a palliative measure. Adjuvant radiotherapy is controversial: there are some authors who recommend its utilization even among patients submitted to complete resection of the lesion. Nevertheless, its true impact on survival and local relapse has not yet been well established[2, 8, 9].

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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Martinez CAR, Palma RT, Waisberg J. Lipoma gigante do retroperitônio: relato de caso. Arq Gastroenterol 2003;40(4):251-255.

RESUMO – ***Racional*** – O lipoma é a neoplasia mesenquimal mais freqüente, raramente localizada no retroperitônio. Na maioria das vezes, o diagnóstico diferencial pré-operatório com os lipossarcomas de baixo grau de malignidade é difícil de ser estabelecido. ***Objetivo*** – Apresentar um caso de lipoma gigante retroperitoneal em mulher de 32 anos que há 2 anos apresentava história de dor e tumor abdominal palpável. A ultra-sonografia abdominal e o enema opaco mostraram grande massa localizada no retroperitônio, que deslocava o ceco e o cólon ascendente. A laparotomia mostrou tumor encapsulado com 20 x 13 x 10 cm e 3.400 g de peso. O estudo histopatológico mostrou presença de lipoma retroperitonial. A paciente encontra-se bem, sem recidiva da doença, 17 anos após a cirurgia.

DESCRITORES – Espaço retroperitoneal. Lipoma, cirurgia.

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