

Recurrent Mediastinal Liposarcoma Twenty Years after the Initial Operation: Case Report

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We report a case of mediastinal liposarcoma, recurrent after 20 years. A 58-year-old man who presented with dyspnea on exertion was found to have a large mediastinal tumor in chest computed tomography (CT), and he was referred to our hospital. He had undergone an extirpation of a mediastinal liposarcoma about 20 years earlier, and we suspected its recurrence. Because the tumor was very large, it was removed in two stages. Histologically it was diagnosed as a recurrence of the previous well-differentiated liposarcoma. Although liposarcoma is one of the most common soft-tissue sarcomas in adults, a mediastinal liposarcoma is rare. Because the recurrence rate is very high, it is necessary to follow up carefully over a long term. (Ann Thorac Cardiovasc Surg 2007; 13: 407–409)

Key words: mediastinal tumor, liposarcoma, recurrence

Introduction

Mediastinal liposarcoma is extremely rare and constitutes less than 1% of all mediastinal tumors. We describe the case of a huge mediastinal liposarcoma that recurred 20 years later, and we removed it in two stages.

Case Report

A 58-year-old man, who presented with dyspnea on exertion, was found in a computed tomography (CT) chest scan to have a large mediastinal tumor, and he was referred to our hospital. He had undergone an extirpation of a mediastinal tumor about 20 years earlier. This was reported to have been a well-differentiated liposarcoma. Physical examination showed dullness on percussion and bilateral decreased breath sounds. Laboratory data, res-

piratory function tests, and arterial blood gas analyses were within normal limits. A chest X-ray showed an enlargement of the middle and lower mediastinum (Fig. 1). A chest CT showed a large mass in the posterior mediastinum, which existed so that it might project in both sides of the thorax from the arch to a diaphragm (Fig. 2). Magnetic resonance imaging revealed no direct invasion. Detection for distant metastasis including cranial and abdominal CTs showed no abnormal findings.

The tumor was very large and existed in the pulmonary hilum on both sides. We did not consider that a one-staged and one-sided approach would allow a complete tumor resection. We then scheduled a two-staged tumor resection through bilateral posterolateral thoracotomy.

First, the resection of a part of the mediastinal mass was performed through a right posterolateral thoracotomy. Because it adhered firmly to the mediastinal structure and we needed to remove as much of the tumor components as possible to prevent any recurrence, we used the Cavitron Ultrasonic Surgical Aspirator (CUSA), and it proved to be very efficient and safe. One month later, a resection of the remaining tumor was performed through a left posterolateral thoracotomy in the same manner.

The tumor was found to contain individually encapsu-

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Fig. 1. Posteroanterior chest radiograph shows mediastinal enlargement.

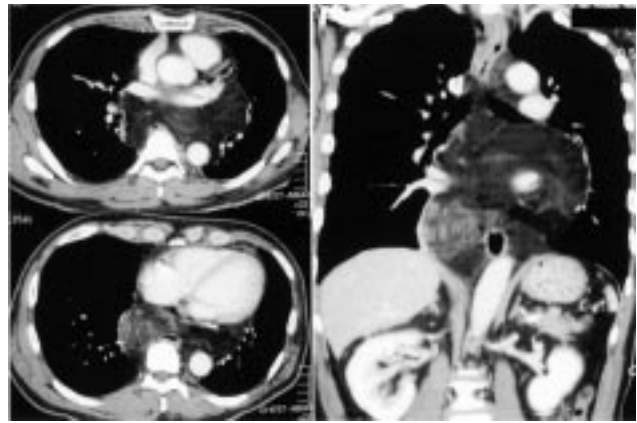


Fig. 2. Coronal chest CT image shows a large mass in the posterior mediastinum.

lated, multiple locules and without any invasion into the surrounding structures such as the esophagus, trachea, and left atrium of the heart. The tumor weighed 700 g. Histological findings showed well-differentiated liposarcoma (Fig. 3), the same as the diagnosis of 20 years ago. We diagnosed that this case recurred after 20 years of initial surgical therapy. The patient has had no recurrence during the 3 years following these operations.

Discussion

Although liposarcoma is among the most common soft-tissue sarcomas in a whole body of them, intrathoracic liposarcoma is very rare,¹⁾ representing about less than 3% of all liposarcomas.²⁾ Liposarcomas usually occur in the deep soft tissues of the lower extremities and retroperitoneum and are seldom found in the mediastinum.¹⁾ A liposarcoma consists of 9% of primary sarcoma in the mediastinum.³⁾

The presenting signs and symptoms are related to size and the direct invasion of contiguous structures. Dyspnea, tachypnea, and wheezing are the most common symptoms, followed by chest pain.⁴⁾ Asymptomatic cases discovered by radiological imaging also have been reported.⁵⁾

Pathologically, liposarcomas are categorized into five groups: well-differentiated, myxoid, round cell, dedifferentiated, and pleomorphic. The clinical behavior of any

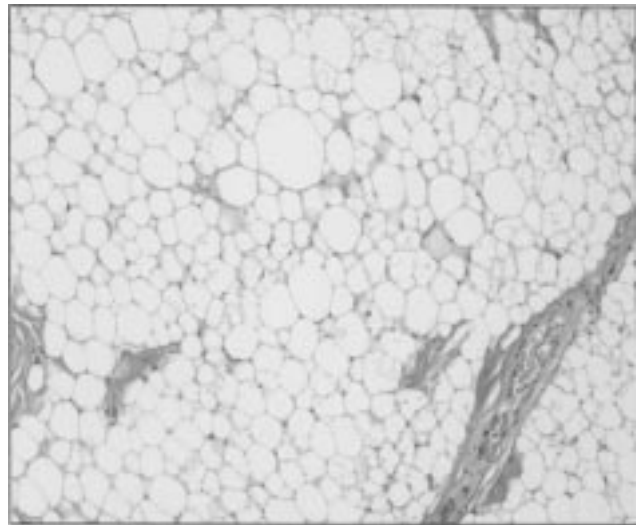


Fig. 3. A histologic section of the resected tumor shows the appearance of the well-differentiated liposarcoma with focal lipoblasts (HE stain; original magnification, $\times 100$).

liposarcoma correlates with its histological pattern. The well-differentiated forms are of low-grade malignancy and rarely metastasize; the poorly differentiated ones are often highly aggressive in behavior. They tend to recur and produce metastases in a higher percentage of cases as reported in the literature. But well-differentiated forms, as in this case, might recur in the long term, which warrants a follow-up, keeping this in mind. We find case reports mentioning recurrence 10 years after primary resection, but there are no reports of recurrence after 20 years.^{2,6,7)} The local recurrence rate depends on the tumor location, which is resected. Metastases to other organs were observed in no patients with well-differentiated liposarcoma.

Of course, total resection is desirable. But most tumors arise in surgically inaccessible locations. Although we come across a few reports that chemotherapy or radiation therapy is effective, we need comprehensive study. Recurrence is common in deep-seated liposarcomas, and it becomes apparent within the first 6 months in most cases, but it may be delayed for 5 to 10 years following the initial excision. Our case recurred after 20 years of initial surgical therapy. Even though patients may have no local recurrence for 10 years, they need close observation over a long term.

In conclusion, though liposarcoma is one of the most common soft-tissue sarcomas in adults, a mediastinal liposarcoma is rare. Because the recurrence rate is very high, it is necessary to follow up carefully over a long term.

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