Primary Peritoneal Liposarcoma in a Middle Age Woman

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Abstract- Liposarcoma is a mesenchymal malignant tumor and is the second-most common soft tissue sarcoma in adults. Primary peritoneal liposarcoma is very rare. We report a case of abdominal liposarcoma originating from peritoneum in 57-year old woman, presenting with hugeness of abdomen. The symptoms had been begun from one month ago without any pain, discomfort or gastrointestinal symptoms. In physical examination a large mass with approximate size of 30×35 cm and firm density was found in left lower part of abdomen. The patient underwent laparotomy. The pathologic diagnosis was well differentiated liposarcoma. After 5 months of treatment the patient is well and no problem, complication or recurrence has been reported.

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Key words: Liposarcoma, perituneum, malignancy

Introduction

Primary neoplasms of peritoneal and subperitoneal region are relatively rare and most of them are malignant and often associated with a poor prognosis (1).

Liposarcoma is a mesenchymal malignant tumor and is the second-most common soft tissue sarcoma in adults. The lower extremities and the retroperitoneum are the main sites of origin of this tumor with the incidence of 30.1% and 18.5%, respectively .Other common sites of tumor with lower incidence are the inguinal and paratesticular regions, chest wall, breast, and mediastinum (2). Primary intra-abdominal liposarcomas are very rare and always initiate from the mesentery and peritoneum (3). The incidence of liposarcoma has been reported between 10% and 12% among soft tissue sarcomas and 0.025% among gastrointestinal tumor surgery (4). Primary peritoneal liposarcoma is very rare and to our knowledge up to now only a few cases (6 cases) have been reported (5-10). In this report we present a case of abdominal liposarcoma originating from peritoneum.

Case Report

A 57-year old woman with the complaint of hugeness of abdomen referred to our clinic.

In her past history there was a total abdominal hysterectomy and bilateral oophorectomy 10 years ago due to abnormal uterine bleeding and also a hernia repair surgery 7 years ago. There was no history of any chronic underlying disease.

Increase in abdomen size had been begun from one month ago without any pain, discomfort or gastrointestinal symptoms or changes in appetite. In physical examination of abdomen a large mass with the approximate size of 30×35 cm and firm density was found in left lower part of abdomen.

In paraclinical assessment all biochemical parameters (including CBC, Bun, Cr, and liver function test) were in normal range. Abdominal ultrasound showed an echogenic mass in abdomen wall. Abdominal CT scan was performed. In CT scan exam, a large abdominal mass with homogeneous density and possible origin of abdomen wall was reported. There were no evidence of lymphadenophathy. The size of liver and spleen was normal. Free fluid was not present in the pelvic and abdominal cavities. Considering these findings, the patient underwent laparotomy for further evaluation. During surgery a large encapsulated, lobulated yellow mass with about 30 cm diameter was found below the fascia and anterior to the peritoneum in left lower part of abdomen. The tumor was not adhering to adjacent organ. There was not free fluid in the pelvic cavities.

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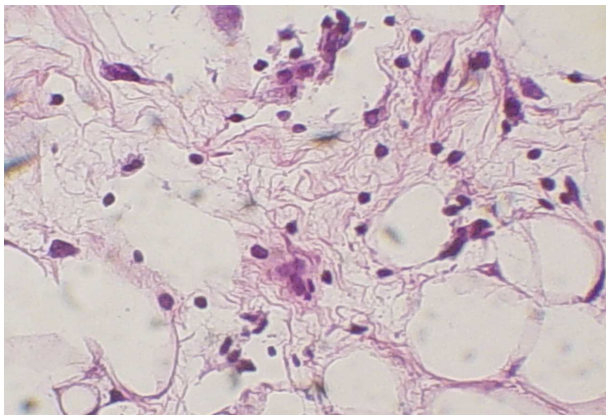

Figure 1. Microscopic appearance of tumor showing atypical cells with pleomorphic hyperchromatic nuclei, high N/C ratio (Hematoxylin eosine staining, magnification 28 ×20×18 cm).

The exploration of abdomen was found normal. The tumor was resected and the frozen section was sent for pathology study. In pathology exam fibrolipoma was reported and the tumor was removed totally and was sent for pathology exam. After 2 weeks of surgery, the final report of pathology was received. Histologically, the tumor was composed of mature adipocyts and few fibrous septa. Some atypical cells with poleomorphic hyperchromatic or vesicular nuclei, high N/C ratio and vacuolated cytoplasm were also identified (Figure 1). The diagnosis was well differentiated liposarcoma. The patient was referred for chemotherapy. After 5 months of treatment the patient is well and no problem, complication or recurrence has been reported.

Discussion

Peritoneal carcinomatosis is a relatively common metastatic manifestation of a variety of organ -based malignancies, particularly of the gastrointestinal tract and ovaries. Primary neoplasm of peritoneal and subperitoneal origin occurs much less frequently than metastic disease in these locations (11). Liposarcoma is one of the most common primary retroperitoneal malignancies; peritoneal liposarcoma is exceptionally rare (12). The most common locations of intra-abdominal liposarcoma are the mesentery, omentum, and gastrointestinal organs. The peritoneal liposarcoma is a malignant tumor with a poor prognosis despite of a surgical resection (13). The diagnosis is always late because it remains asymptomatic for long time to progress to the end stages.

Liposarcoma is classified into five subtypes: well differentiated, myxoid, round cell, dedifferentiated and pleomorphic. The metastasis and mortality rates for well differentiated (as our case) and myxoid liposarcomas are much lower than the others. Liposarcomas often appear as an encapsulated yellowish mass (2).

Most of the previous reported cases (5-10) were in middle age or elderly (such as our case) and their presenting symptoms were different from abdominal pain to ascitis and large abdomen size (similar to ours). Due to asymptomatic disease and late diagnosis most of the cases present with space occupying symptoms owing to the huge tumor mass.

It is usually very difficult to detect the origin of such a huge abdominal sarcoma pre- and post-operatively

Imaging modalities may help in proper diagnosis of the origin of tumor pre-operatively. Ultrasound is of limited value in the diagnosis and topographical nature of the lesion (14).

However, the CT findings can suggest this specific diagnosis when the tumor contains areas of fat attenuation. Fat attenuation is less likely to be seen in higher-grade liposarcomas, such as the pleomorphic and round cell subtypes. However in some cases such as ours imaging modalities may not help in pre-operative diagnosis of tumor type and surgical pathology is the gold standard for definite diagnosis.

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