Malignant Thymoma Associated with Liposarcoma of the Mediastinum
—A Case Report—

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ABSTRACT: Malignant thymoma occurring concurrently with mediastinal liposarcoma in a 49-year-old man is described. The patient underwent an incomplete resection of the mediastinal mass followed by irradiation therapy and additional chemotherapy. He died about 9 months after the detection of a mediastinal mass on chest X-ray films and the immediate cause of death was superior vena cava syndrome. The incidence of primary liposarcoma of the mediastinum alone is extremely rare. Only a few more than 20 with such a lesion have been documented in Japan. A review of the literature of patients with mediastinal liposarcoma and thymoma associated with malignancies revealed no case of an association of thymoma and liposarcoma.

KEY WORDS: malignant thymoma, liposarcoma of the mediastinum

INTRODUCTION

Thymoma have been associated with a variety of hematologic, collagen-vascular, and autoimmune disease states.1 The incidence of malignancy seems to be increased, according to Souadjian et al.2 We report herein our findings in a patient with malignant thymoma associated with a mediastinal liposarcoma.

CASE REPORT

A 49-year-old Master Sergeant of the Ground Self-Defense Forces was admitted to our hospital for treatment of a mediastinal tumor on June 30, 1980. He had been in an excellent health up to June 19, 1980 when he was told that a mediastinal mass was evident on the chest X-ray taken at the annual routine check-up. He began to notice a pressure sensation in the anterior chest. Cough, dyspnea, or weight loss were not evident and his past and family histories were unremarkable. He was a non-smoker.

Physical examination revealed a well-developed man in no acute distress. He was 172 cm tall and weighed 72 kg. Vital signs were within normal limits and stable. Neck veins were flat. There was no cervical lymph node enlargement. Lungs were clear bilaterally and heart sounds were normal to auscultation.

The chest rentogenograms demonstrated a protruding solid mass in the right mediastinum. It was sharply demarcated and of homogenous density without calcification or cavitation. (Fig. 1) A review of the chest rentogenograms taken during the past 26 years revealed an extremely rapid growth.
of the mass within the last one year. There was displacement of the bronchial trees of the left lung by the mass. Computerized axial tomograms of the chest demonstrated a large tumor occupying the whole of the anterior mediastinum. (Fig. 2) Rentgenographic examination of the bones or bone survey with $^{99}$Tc revealed no metastatic lesions. Pulmonary function tests, ECG, and EMG of the extremities were all normal. Hematology and urinalysis were also within normal, except for a serum LDH of 752 units.

Surgery was performed on July 18, 1980. The anterior mediastinum was entered through a median sternotomy incision. There were diffusely infiltrating grey-yellow masses with nodular and lobulated structures involving the whole of the anterior mediastinum. Because of the considerable extension of these tumors to the adjacent tissues, resection was considered to be incomplete. The right mediastinal pleura and the right upper lung lobe, which firmly adhered to the tumors, were partially removed. The pericardium appeared intact without fluid accumulation. The resected specimen weighed 750 gm and measured $10 \times 10 \times 15$ cm in its greatest diameter. There were fibrous and lobulated structures in the solid whitish areas and myxoid changes in the yellow areas of rubbery consistence on section, as illustrated in Figs. 3 and 4. Microscopically, the parenchyma of the solid areas consisted of proliferation of thymic spindle cells with occasional mitosis and perivascular patterns. Apparent capsular invasion of thymic epithelial cells, and fibrous or necrotized focal lesions were frequently observed in these solid areas. The yellowish areas consisted of fatty tissues with bizarre multinucleated lipoblasts. A diagnosis of well differentiated liposarcoma in association with malignant thymoma was made. (Figs. 5 and 6)

The patient was treated with 10 mega volts X-ray radiation therapy consisting of a total dose of 5,000 rads to the mediastinum and both supra clavicular areas. He was discharged in remission on September 13, 1980. On November 17, 1980 lymph nodes

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**Fig. 1.** Chest X-ray film. A protruding solid mass in the right mediastinum with a sharply demarcated margin and homogenous density is demonstrated.

**Fig. 2.** CAT of the chest. The upper shows a preoperative CAT and the lower a postoperative one. A large tumor occupies the whole of the anterior mediastinum.