Benign Mesenchymoma of the Mediastinum

We report our recent experience of a rare case of a benign mesenchymoma in the mediastinum. A 24-year-old man was admitted to our hospital with an abnormal shadow on chest X-ray. A chest computerized tomography scan and magnetic resonance imaging showed an anterior mediastinal mass along the right border of the pericardium. The tumor was surgically resected. It was yellow on the surface, 12.5 x 10.0 x 3.8 cm in size, and 230 g in weight. The histopathological diagnosis was a benign mesenchymoma. The postoperative course was uneventful. A search of the literature revealed that a benign mesenchymoma in the mediastinum is extremely rare. It seems to be difficult to reach a definitive diagnosis preoperatively. Surgical resection can confirm the diagnosis, and is curative. (JJTCVS 2000; 48: 814-816)

Key words: mesenchymoma, surgical treatment, mediastinal tumor

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Stout first used the term “mesenchymoma” in 1948 to describe a tumor consisting of two or more mesenchymal elements. A mesenchymoma in the mediastinum, either benign or malignant, is extremely rare in the world literature. A benign mediastinal mesenchymoma with a long-term survival is so rare that only 7 cases have been reported in the world literature.2-6 Of the 201 cases of a malignant mesenchymoma reviewed by Stout and Lattes,4 only four (2%) arose from the mediastinum. The prognosis for a patient after surgery for a malignant mesenchymoma appears to be poor and varies from case to case depending upon the predominant histological pattern.2,7-10

Here we reported successful surgical treatment of a rare case of a benign mediastinal mesenchymoma. Computerized tomography (CT) scan and magnetic resonance imaging (MRI) confirmed an inhomogeneous mass associated with large amount of fat. Curative surgical resection of the tumor was performed. Histopathological results confirmed the diagnosis of a benign mesenchymoma in the mediastinum. The mesenchymoma was composed of lymphangioma and lipoma. The patient has recovered fully.

Case

A 24-year-old male was admitted on August 5th, 1999. A mediastinal mass had been detected on a chest roentgenogram taken during a routine health screening at the age of seven. It had only slightly

Fig. 1. A huge mass in the mediastinum situated adjacent to the pericardium on a chest radiograph.
gradually grown on chest roentgenograms taken during junior high school and high school. However, he had received no treatment. A health screening at his company again showed the mediastinal mass and he was referred to our institution for further evaluation and treatment.

At the time of admission, the patient was asymptomatic. Examination revealed no abnormalities other than weak respiratory sounds on the anterior chest wall and percussive dullness. A complete hematological evaluation, including blood gases, showed normal results. Tests of pulmonary function showed a forced vital capacity of 4.62 l (108% of predicted), and a forced expiratory volume of 3.49 l per second. An electrocardiogram showed sinus rhythm. A roentgenogram revealed a well-circumscribed mass in the mediastinum obscuring the right border of the pericardium (Fig. 1). CT scan and MRI (Fig. 2) confirmed an in-homogeneous mass with large areas of fat. The preoperative differential diagnosis included sarcoma, and thymolipoma thymoliposarcoma.

The operation was performed on August 9, 1999. The well-circumscribed mass presented in the right anterior mediastinum and was not adherent to surrounding structures such as the anterior chest wall, lung, and thymus. The tumor was adherent to the pericardium. The tumor was firm, yellow, and irregular in appearance. It was removed completely with a 2 cm curative margins through a right posterolateral incision. The mass measured 12.5 x 10.0 x 3.8 cm in size, and 230 g in weight. Its external surface was primarily smooth and glistening, and the cut-surface was yellow-white (Fig. 3). Histopathologically, the tumor consisted of various-sized elongated or dilated lymph vessels, with a proliferation of mature adipocytes, associated with isolated regions of immature myogenic cells, focal fibrosis, and necrotic adipose tissue. No epithelial elements were present. The final histopathological diagnosis was a benign mesenchymoma (Fig. 4). The patient’s postoperative course was satisfactory and uneventful. He was discharged at 21 days after the surgery and has experienced no recurrence at 7 months to date after the operation.

Discussion

A benign mesenchymoma is an uncommon tumor containing at least two or more differentiated mesenchymal elements, in addition to fibrous tissue. There is little evidence of any relationship between anatomical location of the tumor and type of differentia-