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MEDIASTINAL LIPOMA SIMULATING PERICARDIAL CYST

Hiroaki NAOE, Toshiharu MATSUSHIMA, and Takehiro NAKASHIMA*

Division of Rospiratory Diseases, Department of Medicine, Kawasaki Medical School, Kurashiki, 701-01, Japan

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Abstract

A case of the mediastinal lipoma, occurring in an asymptomatic female in her right cardiophrenic region, is reported. Radiolucency and lobulation are pointed out as the two roentgenological characteristics of this tumor, and the possibility of its pre-operative diagnosis is discussed.

CASE REPORT

A 56-year-old, asymtomatic female was found upon group chest examination to have an oval, well-defined mass at the right, anterior, cardiophrenic angle in her chest film. The tumor measured about 5 cm across on the frontal view (Fig. 1), appearing homogenous and radiolucent on the lateral projection (Fig. 2). Tomography again demonstrated an oval, well-defined, radiolucent tumor (Fig. 3), while bronchography indicated its extrapulmonary location (Fig. 4) and intrathorachography its mediasrinal origin with slight lobulation (Fig. 5). Thoracotomy was performed under diagnosis of the pericardial cyst, and revealed an encapsulated, fatty mass, measuring around $5 \times 5 \times 5$ cm^3 and lying between the right parietal pleura and the pericardium. Histologically, the encapsulated lipoma was confirmed (Fig. 6).

*Asahigaoka Hospital, Okayama, Japan.

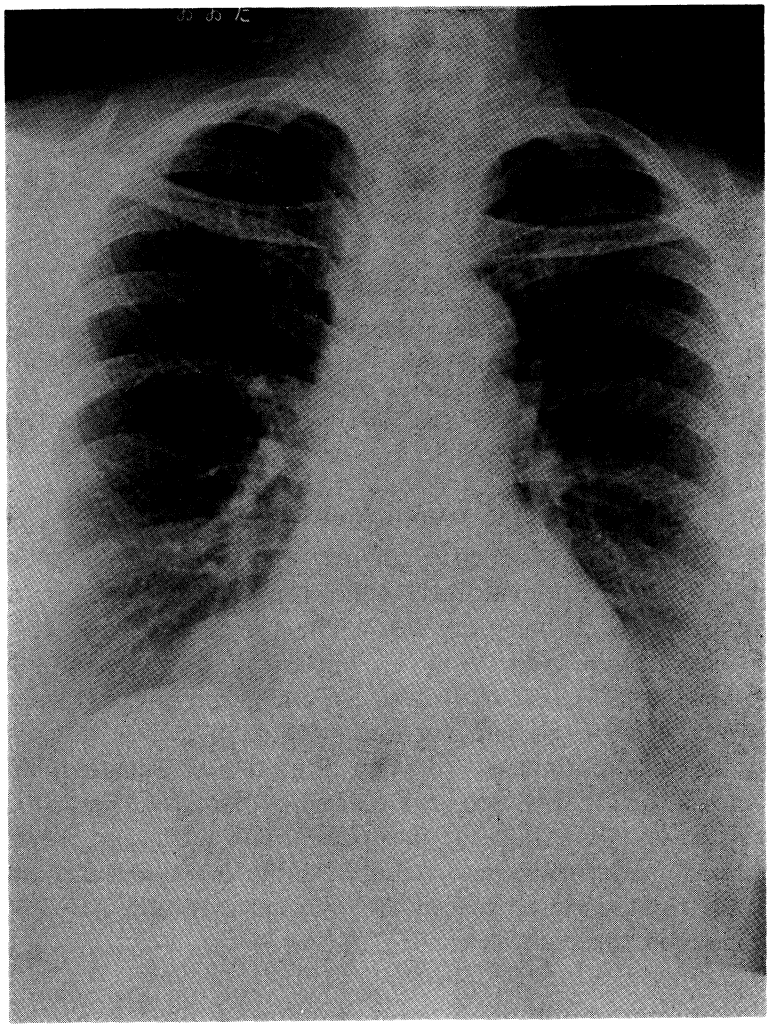

Fig. 1. A radiolucent, oval mass is seen on the frontal view at the right cardiophrenic angle.

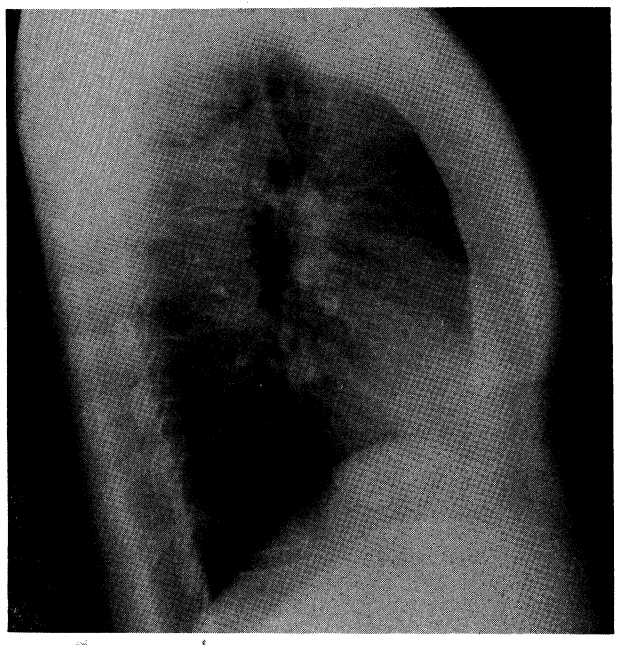

Fig. 2. Right lateral projection demonstrates the radiolucency of the mass.

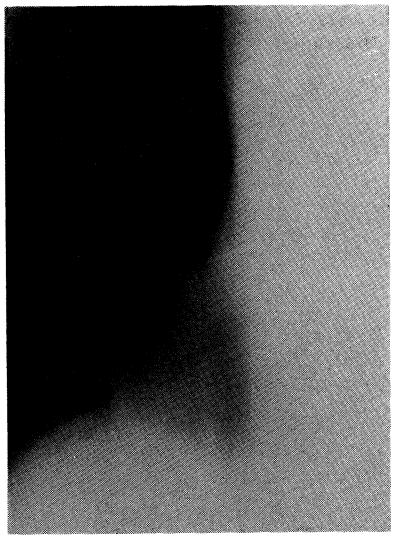

Fig. 3. Tomographic confirmation of an oval, well-defined, radiolucent tumor.

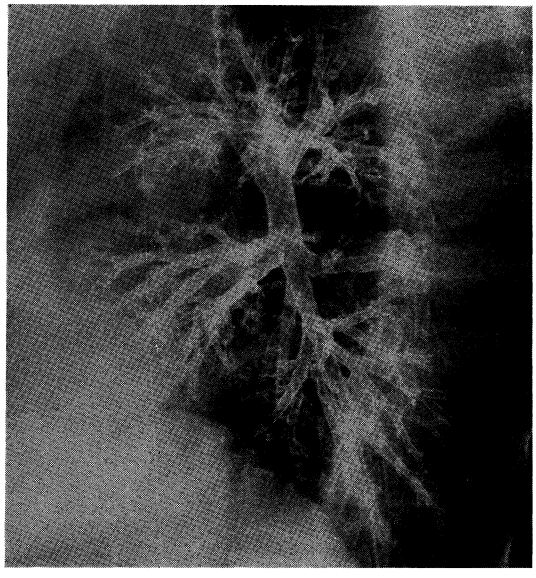

Fig. 4. Bronchogram showing extrapleural, radiolucent tumor at right, anterior cardiophrenic angle.

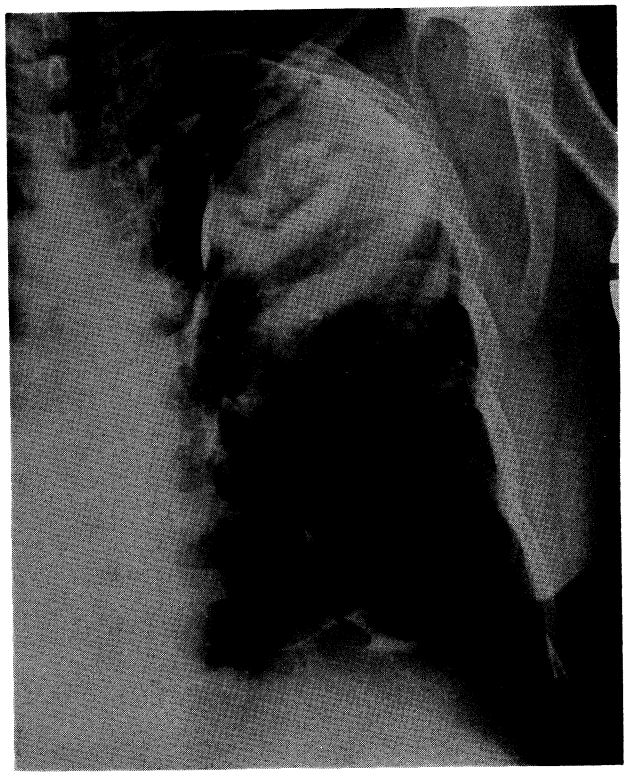

Fig. 5. Right intrathorachogram showing mediastinal origin with slight lobulation of the tumor.

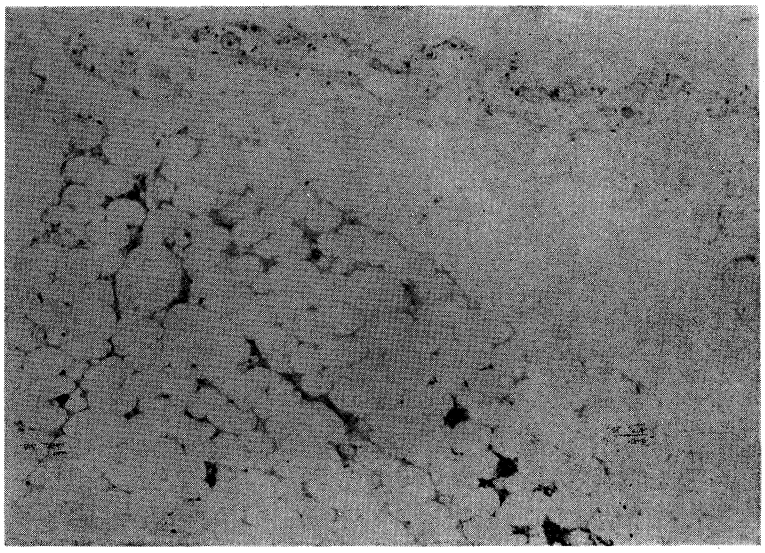

Fig. 6. The presence of capsule and mature fat cells consistent with lipoma. H. & E., ×40

DISCUSSION

In the routine chest roentgenography, the pericardial cyst is most frequently encountered among mediastinal tumors of the right cardiophrenic angle, wheaeas the existing literature points out rarity of the mediastinal lipoma. According to Kasai *et al.*[1], incidence of this tumor is only three out of 921 mediastinal tumors reported in Japan, and Ringertz *et al.*[2] found one lipoma out of their 155 cases of the primary mediastinal tumor and cyst. Mostly, the mediastinal lipoma is asymptomatic[3,4]; in the present case, the tumor was not so large as to exert any pressure upon its contiguous structures, and the patient continued to be asymptomatic. While some authors[5,6] have called attention to its roentgenological features, such as (a) radiolucency because of the fatty nature, (b) hourglass or dumbbell-shape with pedunculation (c) change in shape with respiration, and (d) transmission of the cardiac pulsation, the clinical diagnosis is usually made after the surgical exploration, as in the present case. Characterstically, this tumor presents lobulation in the intrathorachogram, as the lipomatous tissue is generally soft and has a thin capsule. Therefore, pre-operative diagnosis of the mediastinal lipoma may be made without difficulty, if a scrupulous care is given to radiolucent, lobulated tumors in the roentgenological examination of mediastinal tumor.

REFERENCES

1) Kasai, M. and Terasawa, S.: Incidence and Pathology of Mediastinal Tumor. *J. Chest Dis.*, **8**: 281 (1964), in Japanese.
2) Ringerz, N. and Lidhorm, S. D.: Mediastinal Tumors and Cysts. *J. Thoracic Surg.*, **31**: 456 (1956).
3) Rosenberg, R. F., Rubinstein, B. M. and Messinger, N. H.: Intrathoracic Lipomas. *Chest*, **60**: 507 (1971).
4) Heuer, G. H.: Thoracic Lipoma. *Ann. Surg.*, **98**: 801 (1933).
5) Gramiak, R. and Koerner, H. J.: A Roentgen Diagnostic Observation in Subpleural Lipoma. *Amer. J. Roentgenol.*, Rad. *Therap. Nuclear Med.*, **98**: 465 (1966).
6) Dollry, F. S. and Brewer III, L. A.: Diagnosis and Treatment of Primary Intrathoracic Tumors. *J. A. M. A.*, **121**: 1130, (1943).