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Mediastinal Hemangioma

〈Report of a case〉

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—국문초록—

종격동의 혈관종 1예 보고

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종격동의 해면상혈관종은 비교적 드문 것으로 알려져 있다.
우리나라에서는 아직 이에대한 보고가 없었기에 우리들이 경험한 일예를 보고하고저 한다. 종격동혈관종은 특별한 증상이나 X선 소견을 나타내지는 않는다. 그러나 가끔 혈관종내에 정맥석을 관찰한다든가 투시상 환자를 회전시켰을 때에 종괴윤곽이 소실되는 점에 유의한다면 진단이 가능하다.

With popularization of chest roentgenograms more tumors were diagnosed in the mediastinum. However, in spite of increasing use of chest roentgenogram and increasing frequency of chest surgery for mediastinal mass, hemangioma remains so rare that it is not usually included in the differential diagnosis of the mediastinal tumor. To our knowledge there has been no previons report of mediastinal hemangioma in Korea. In the present communication, we report a case of this rate tumor.

Case Presentation

A 15-year-old school boy was admitted to St. Mary's Hospital on July 8, 1977 because of protrusion of right anterior chest wall. He had been in good health until his parents noted bulging of his right chest two weeks previously. The patient complained no symptoms except for shortness of breath on moderate exertion. In the interim he visited a local clinic where a PA chest roenthenogram was obtained and a mass obliterating the right cardiac border was found.

The PA and right lateral chest roentgenogram showed a 9×8×5cm sparply demarcated cystic mass attached closely to the heart. The mass was lobulated and inseparable from the heart shadow. The corpus sterni showed forward bulging over the mass. Fluoroscopically, the mass was nonpulsating and located in the anterior inferior medastinum. The shape and location did not change in different position. However, rotation of the patient to lateral position resulted in gradual disappearance of the mass shadow. Thus, the mass became ill defined in oblique position and finally disappeared into the cardiac shadow when the patient was rotated to lateral position.

Physical examination on admission revea-

led a protrusion of the right anterior chest wall. Breathing sound was clear and no bruit or murmur was heard. Hematologic test revealed mild anemia (hemoglobin, 11.8g and hematocrit 30%). Blood chemistry and ECG were within normal limits.

Preoperative diagnosis based chiefly on the radiologic finding was pericaridial cyst. Bronchogenic cyst, dermoid cyst or loculated mediastinal effusion was considered as another possibility.

A right thoracotomy revealed varying sized multilocular large cystic masses located at the right cardiophrenic angle.

The cysts were firmly adhered to the pericardium and diaphragm. The right lower lung was displaced upward by the mass without adhesion. The tumor mass was removed along with adherent pericardium.

The gross specimen consited of a tan gray rubbery mass, measuring 12.5×8×6cm and a smaller separated mass, measuring 8×5×2cm. The larger mass showed two large cystic chambers, measuring 4×4.5cm with smooth external surfaces. On cut section these two cysts were filled with dark reddish blood clots with smooth inner surfaces. In addition to these cysts the larger rubbery mass contained two focal solid areas. One focal solid area, measuring 5×3.5cm, showed reddish brown cut surface and the other focal area measuring 4×3.7 cm showed multilocular cavitation. The smaller mass was grayish brown in color. The microscopic examination disclosed multiple blood filled spaces lined with single-layer endothelial cells embeded in a loose interstitial stroma. In some fields, hemolysis was evident. The pathologic diagnosis was cavernous hemangioma.

Comment

The first report of mediastinal hemangioma was published in 1944 by Adams, W.E. et al[1]. and in 1957 Balboa et al. found 66 cases in the literature, but only 34 had been sufficiently described to warrant inculusion in their review.[2] The number of reported cases by 1962 was 67.[3]

In fact this tumor is so rare that of 570 vascular tumors seen at Johns Hopkins Hospital before 1935 none were mediastinal[4]. Of 105 mediastinal cysts and tumors in the patients less than 16 years old seen in the Mayo Clinic between 1935 and 1968, 3 cases were hemangioma.[5]

The age of patients ranges from premature infancy to 61 years old covering virtually all ages. It occurs in both sexes equally. The lesion is discovered usually by routine chest roentgenography and no characteristic symptomsor roentgenographic findings were known.

The majority of the mediastinal hemangioma are in the anterior mediastinum. Of the 67 cases of hemangioma of the mediastinum reviewed by Leibovici et al. 45 were located in the anterior mediastinum and 17 in the posterior mediastinum.[3]

The hemangioma is usually well encapsulated and localized although it often assumes a poorly defined mass. The size and shape may differ consideraly. In spite of its histologic benignitt it may be invasive. Local infiltration and invasion into the extradural space of the thoracic spinal canal with cord compression occurred.[6] Sometimes it is adherent to the thymic capsule and the pericardium. The adjadent ribs or vertebral bodies may be either eroded

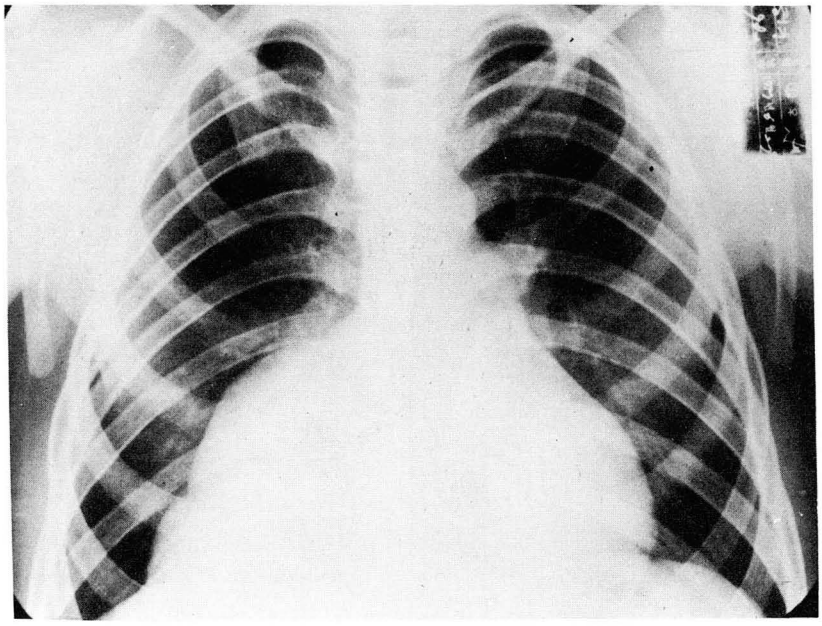

Fig. 1. The anterior view of the chest reveals a large lobulated sharply defined cystic mass lesion involving the right paracardiac portion. The cardiac silhouette is totally obliterated.

or hypertrophic.

As in hemangiomas of other regions the mediastinal hemangiomas may contain small rounded calcifications representing phleboliths.[7, 8, 9] When the phleboliths are seen within the mediastinal mass, the diagnosis can be made with a reasonable degree of certainty.

The hemangioma tends to be clearly defined in the frontal view but is often ill defined or virtually disappears in a lateral or oblique pjroection.[7, 10] Feinberg[10] stated that the fact the compact and more dense anterior teratomas and posterior neurogenic tumors are clearly outlined in all projections suggests a differential diagnostic criterion. The difference in tissue density probably accounts for the tumor's softness to the roentgen ray as well as to palpation.

In spite of vascular structure of mediastinal hemangioma no major communication exists between the great vessels and the tumor.[10] Therefore angiography is not helpful.

The lesions to be differentiated are teratoma, thymoma, neurogenic tumor, pericardial cyst, cystic hygroma, and loculated mediastinal effusion.

Surgical excision is treatment of choice. Recurrence after excision is rare.

Abstract

A case of cavernous hmangioma of the anterior mediastinum was reported. Brief review of mediastinal hemangioma is given. This is a rare tumor and lacks in characteristic symptoms or roentgenoloic findings. The possibility of mediastinal hemangioma should be entertained, however, when asymptomatic mediastinal mass is associated with phleboliths and rotational obliteration

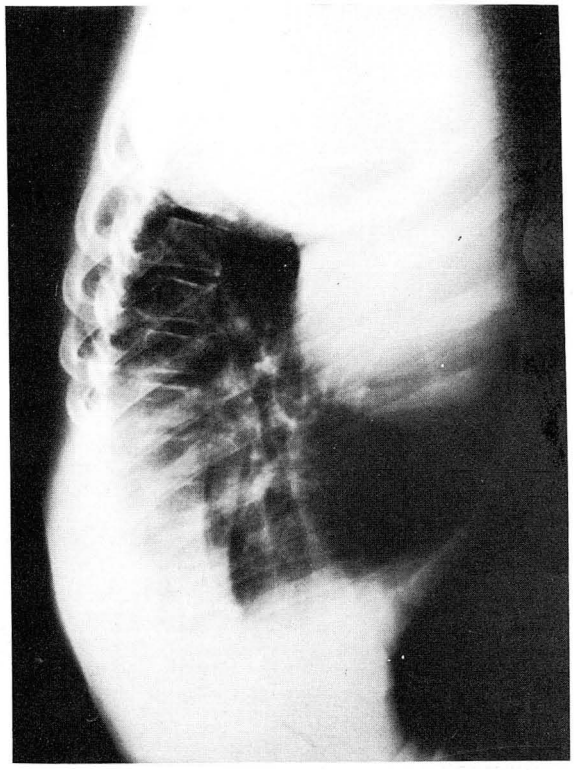

Fig. 2. The right lateral view of the chest shows the mass to have blended imperceptibly into the cardiac density. This phenomenon along with bulging of the sternum has been claimed to be suggestive of mediastinal hemangioma.

under fluroscopy.

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