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CT of Mediastinal Hemangioma: Case Report

Seon Kwan Juhng, M.D., See Sung Choi, M.D., Byung Suk Roh, M.D., Chang Guhn Kim, M.D., Jong Jin Won, M.D.

Department of Radiology, Wonkwang University School of Medicine

— Abstract —

We decribe the CT findings in a case of mediastinal hemangioma. Precontrast enhanced CT demonstrated a homogeneous soft tissue mass with several nodular calcifications indicating phleboliths. Contrast enhanced CT revealed some areas of enhancement similar to that of adjacent vascular structures. Hemangiomas of the mediastinum, although rare, should be included in the differential diagnosis of enhancing mediastinal masses.

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Mediastinum, hemangioma 67.3159

In the mediastinum, hemangiomas are rarely encountered. They usually are not included in the differential diagnosis of mediastinal tumors as they represent less than 0.5% of mediastinal masses (1). Enhancement of a mediastinal mass that is demonstrated by contrast enhanced CT can be useful in limiting the differential diagnosis. Enhancing mediastinal masses that have been previously reported include intrathoracic goiter, pheochromocytoma, paraganglioma, Castleman disease, carcinoid tumor, parathyroid adenoma, mediastinitis, leiomyosarcoma, neurofibrosarcoma, and melanoma (2).

We report a case of surgically proven mediastinal hemangioma.

CASE REPORT

A 8-year-old girl presented with a history of left anterior chest discomfort for several years. Posteroanterior view of the chest radiograph demonstrated a large mediastinal mass shadow which overlapped with the left hilum (Fig. 1). It had the hilum overlay sign and on lateral view of the chest the radiolucency of the retrosternal space was decreased. CT scan of the chest revealed a well-defined left anterior mediastinal mass of relatively homogeneous soft tissue attenuation with several nodular calcifications, which were also visible on plain radiographs (Fig. 2). Some areas showed enhancement similar to that of adjacent vascular structures while others remained hypodense, the latter with attenuation numbers of about 30 UH (Fig. 3).

The maximum cross-sectional diameter was approximately 4×5cm and the craniocaudal extension was 11cm.

At surgery, a large dark-reddish well-encapsulated mass was resected. Several small cystic lesions were found on the surface of the mass.

Histopathologic examination revealed find-

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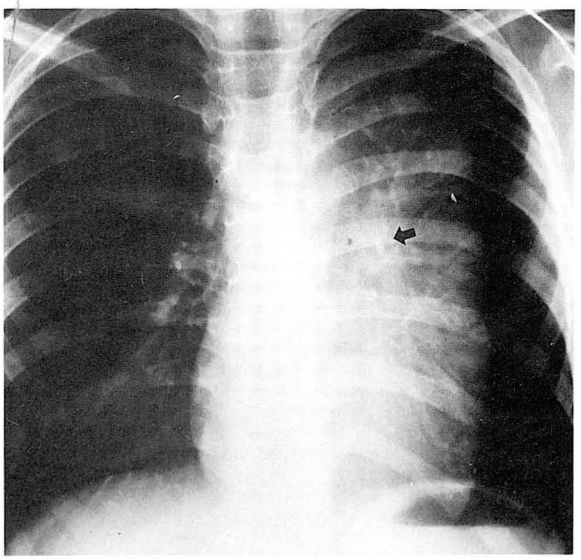

Fig. 1. Chest radiograph shows a large mediastinal mass in left superior mediastinum. Multiple small calcifications are seen (arrow).

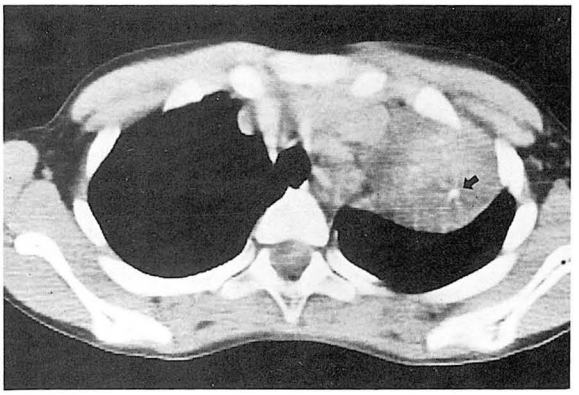

Fig. 2. CT scan obtained before intravenous injection of contrast media demonstrates a relatively homogeneous soft tissue mass with several small phleboliths (arrow).

ings of a benign hemagioma (type unspecified). Specimen radiographs exhibited few phleboliths and many small cystic areas.

DISCUSSION

Benign hemangiomas are tumors of the vascular system, originating from endothelial cells. In the mediastinum, they are rare tumors compris-

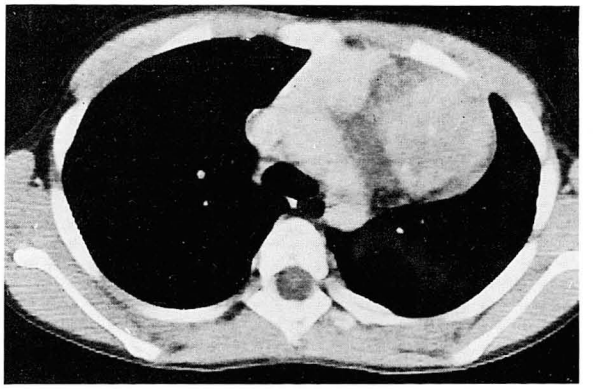

Fig. 3. Contrast enhanced CT scan reveals enhancement of some areas of the mass similar to that of adjacent vessels.

ing 0.5% of mediastinal masses (1). According to Cohen et al. (1), only 103 well decu-mented cases had been reported in the literature wntil 1987; . This report describes another surgically proven case.

Mediastinal hemangiomas are usually discovered on routine chest X-ray examination, often in asymptomatic patients, as described by Feinberg (3). Davis et al. (4) emphasized the presence of phleboliths on chest radiographs in patients with mediastinal vascular tumors and reported an incidence of 10%. Cohen et al. (1) reported calcification in two out of 15 patients, both visible only on CT scans. In our case multiple phleboliths were demonstrated on posteroanterior and lateral radiographs but were more clearly seen on CT.

To our knowledge, there have been only a few reports on the CT findings of mediastinal hemangiomas (1,5-8). Hemangiomas are usually homogeneous and have decreased attenuation (about 30 HU), and sometimes have the calcification within the masses on precontrast CT (1,5-8), as in our case.

Patterns of contrast enhancement that were described in the literature are marked enhancement similar to great vessels (5), homogeneous enhancement (6), and inhomogeneous enhancement (8).

Hemangiomas of the mediastinum, although rare, should be included in the differential diagnosis of enhancing mediastinal masses.

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〈국문 요약〉

종격동 혈관종의 전산화단층촬영 소견 : 증례 보고

원광대학교 의과대학 방사선과학교실

정선관 · 최시성 · 노병석 · 김창근 · 원종진

혈관종은 종격동에서는 아주 드물게 발생하여 감별진단에 잘 포함시키지 않으나 조영제를 경정맥 주입후 촬영한 CT 사진상 주위 혈관과 비슷한 정도로 조영증강이 잘되기 때문에 조영증강이 잘되는 다른 연조직 종괴와 감별을 요한다.

비록 발생빈도가 낮을지라도 조영제 주입후 촬영한 CT상 조영증강 효과가 있는 종격동 종괴의 감별진단에 포함시켜야할 종격동 혈관종 1예를 보고한다.