

A Case of Mediastinal Cavernous Hemangioma

순천향대학교 의과대학 흉부외과학교실, 소아과학교실¹, 병리학교실²

이석열 · 박경배¹ · 오미혜² · 이승진 · 이철세

INTRODUCTION

We experienced an abnormal mass in the mediastinum in 11 year old girl which the mass was removed through thoracotomy. Microscopic findings of the mass showed cavernous hemangioma. It is usually found incidentally. We report a case of mediastinal cavernous hemangioma.

CASE REPORT

An 11-year-old girl referred for evaluation of anterior mediastinal mass that was incidentally detected by chest radiography during a routine health check. Chest X-ray, chest CT and MRI showed a 5cm sized mass on mediastinum (Fig. 1). The mass was cystic in nature and extended to contralateral mediastinum. Trachea and superior vena cava were

compressed by the mass. There was no phlebolith. Direct surgical removal was chosen for diagnosis and treatment. The mass was removed through right thoracotomy. Dissections of the mass was performed along the surface of trachea and superior vena cava and there was no excessive amount bleeding. The excised mass was a lump of soft tissue and it was 5.5X4×3 cm in size. Grossly, the fine trabeculated cut surface was covered with diffuse hemorrhage. The cystic spaces were filled with serosanguinous fluid(Fig. 2). Pathologic examination revealed that the tumor was composed of cystically dilated thin walled blood vessels. The final diagnosis was a cavernous hemangioma. The immediate postoperative course was uneventful and she is doing quite well at 12 months follow-up after operation.

DISCUSSION

Mediastinal hemangioma is rare intrathoracic lesions that are grossly well

접수일 : 09/4/15 게재승인일 : 09/10/14
교신저자 : 이석열, 330-721 충남 천안시 봉명동 23
순천향대학교 천안병원 흉부외과
Tel : 041)570-2193, Fax : 041)575-9674
E-mail: csdoctor@schca.ac.kr

circumscribed, cystic, haemorrhagic tumours¹. Mediastinal hemangiomas are histologically divided into two groups: capillary hemangiomas and cavernous hemangiomas. Although these two types of hemangioma resemble each other in their clinical behavior, they show different histomorphological growth patterns. The cavernous type does not regress spontaneously, in contrast to the capillary type². Mediastinal hemangiomas are usually incidentally detected on a routine chest radiograph^{3,4}. Symptomatic patients

present with cough, chest pain, hoarseness, or dyspnea depending on the origin, localization, size, and extension of this tumor. Mediastinal hemangiomas appear as sharply margined, circular, or lobular masses on chest X-ray films or chest CT images; however, such findings are not sufficient for a diagnosis⁵. Even though phleboliths are radiologically characteristic of the vascular nature of the mass, they are only visible in 10% of all cases⁶. This case had no phleboliths.

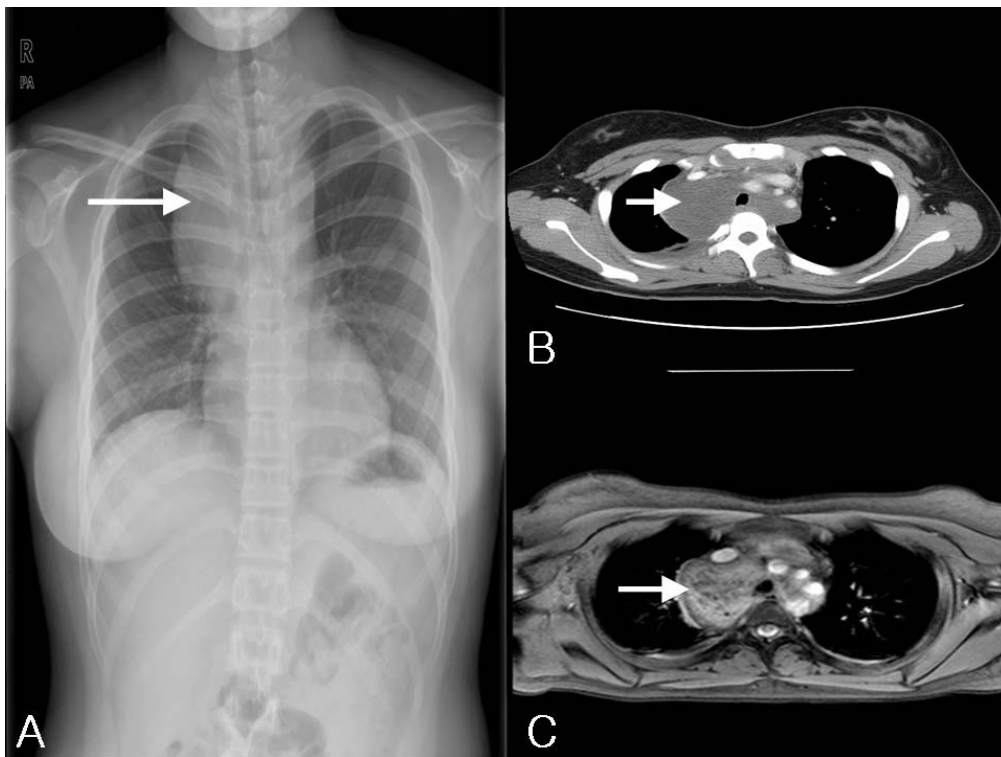


Fig. 1. Arrow of picture showing mediastinal mass on chest x-ray(A), CT(B) and MRI(C). About 5cm sized mediastinal mass involve contralateral mediastinum and trachea and superior vena cava are compressed by this mass.



Fig. 2. Resected specimen showing the fine trabeculated cut surface is covered with diffuse hemorrhage. The cystic spaces are filled with serosanguinous fluid.

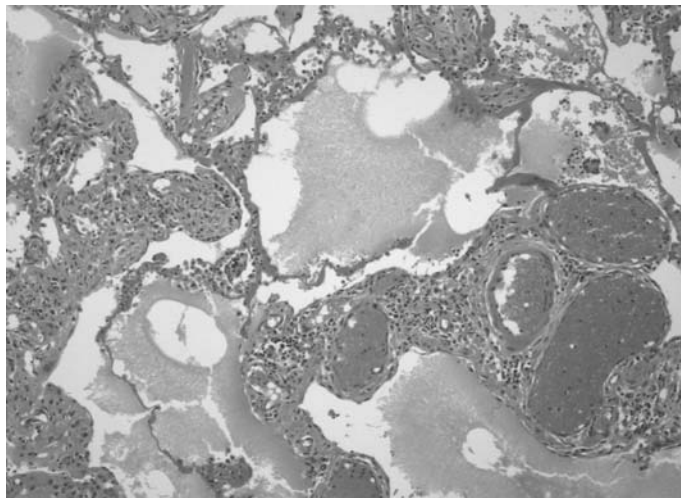


Fig. 3. The tumor is composed of cystic dilated blood vessels with thin walls. H&E stain (x40).

Chest CT is useful in evaluating the extent of the lesions in order to assess the effects of nonoperative therapy or to plan operative intervention. Furthermore, angiography seldom reveals findings suggestive of a vascular tumor⁷. In contrast to CT or angiography, MRI is

thought to be useful in the diagnosis of mediastinal hemangioma. The diagnosis is difficult to make both clinically and radiologically, and biopsies may not result in a definitive diagnosis. The treatment of choice for cavernous hemangioma of the mediastinum is surgical resection³. The

angiographic embolization of feeding vessels proved quite effective in minimizing operative blood loss in cases in which total resection is possible⁸. In cases in which radical resection proves difficult, radiation therapy has been employed as a selective treatment modality⁹.

REFERENCES

1. Kim DW, Lee JY, Bae CY, Shin WS, Maeng DH, Kwak YT, LEE SY: *Mediastinal Cavernous Hemangioma*. Korean J Thorac Cardiovasc Surg 31: 69-73, 1998
2. Moran CA, Suster S: *Mediastinal hemangiomas: a study of 18 cases with emphasis on the spectrum of morphological features*. Hum Pathol 26:416-21, 1995
3. Yamazaki A, Miyamoto H, Saito Y, Matsuzawa H, Sakao Y, Anami Y: *Cavernous hemangioma of the anterior mediastinum: case report and 50-year review of Japanese cases*. Jpn J Thorac Cardiovasc Surg 54:221-4, 2006
4. Maeng DH, Youn YN, Chung KY, Paik HC: *Cavernous Hemangioma in the Anterior Mediastinum - A case report*. Korean J Thorac Cardiovasc Surg 35: 82-8, 2002
5. McAdams HP, Rosado-de-Christenson ML, Moran CA: *Mediastinal hemangioma: radiographic and CT features in 14 patients*. Radiology 193:399-402, 1994
6. Dijkstra J, van Leeuwen H, Marsman JWP, Verbeeten B Jr: *A cavernous haemangioma of the mediastinum*. ROFO Fortshur Geb Rontgenstr Nuklearned 140:97-9, 1984
7. Ishii K, Maeda K, Hashimoto M, Miyamoto Y, Kanegawa K, Kusumoto M, et al.: *MRI of mediastinal cavernous hemangioma*. Pediatr Radiol 20:556-7, 1990
8. Ni SJ, Fan XM, Ran WZ: *Treatment of huge hemangioma with intervention-embolism and circumferential suture maneuver*. Zhongguo Xiu Fu Chong Jian Wai Ke Za Zhi 14:363-4, 2000
9. Weber TR, Connors RH, Tracy TF Jr, Bailey PV: *Complex hemangiomas of infants and children. Individualized management in 22 cases*. Arch. Surg 125: 1017-20, 1990

A Case of Mediastinal Cavernous Hemangioma

Seock Yeol Lee, M.D., Kyung Bae Park, M.D.¹, Mee Hye Oh, M.D.²,
Seung Jin Lee, M.D., Cheol Sae Lee, M.D.

*Department of Thoracic & Cardiovascular Surgery, Department of
Pediatrics¹, and Department of Anatomic Pathology², Soonchunhyang
University College of Medicine, Cheonan, Korea*

We report a case of cavernous hemangioma of the anterior mediastinum that was incidentally detected by chest radiography taken at a routine health check-up. A mass lesion was seen in the anterior mediastinum on computed tomography and magnetic resonance imaging. Direct surgical removal was performed for diagnosis and treatment through right thoracotomy. Histopathology confirmed the mass as a cavernous haemangioma. Post-operative course was uneventful.

(J Kor Assoc Pediatr Surg 15(2):161~165), 2009.

Index Words : *Mediastinum, Hemangioma, Cavernous hemangioma*

Correspondence : *Seock Yeol Lee, M.D., Department of Cardiothoracic and Vascular Surgery, Soonchunhyang University College of Medicine 23, Bong-Myung Dong, Chunan, Chungcheongnam-do 330-721, Korea*

Tel : 041)570-2193, Fax : 041)575-9674

E-mail: csdoctor@schca.ac.kr