

Thymic Cavernous Hemangioma: An Incidental Finding during CABG in A Seventy-Year-Old Woman (A case report)

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Abstract:

A 70-year-old woman underwent coronary artery bypass grafting (CABG) due to coronary heart disease in our center. Intraoperatively, the thymic gland seemed bulky and appeared to contain blood clots, giving the impression of a hemorrhagic cyst of the gland.

The lesion consisted of variously-sized blood-filled channels with flat lining and extensive fresh and old hemorrhage as well as organized thrombus formations. The remnants of the thymus gland in the periphery could also be seen.

There being no evidence of malignancy in this vascular tumor, a diagnosis of thymic cavernous hemangioma was made. The operation was uneventful, and the patient was soon discharged from the hospital in good clinical condition.

Key words: Thymus gland - Cavernous hemangioma

Introduction

We present a 70-year-old woman who underwent coronary artery bypass grafting (CABG), during which she was found to have a large thymic gland that seemed to contain blood clots.

Hemangiomas are rare mediastinal neoplasms, accounting for 0.5% of all masses in that region. The diagnosis is in fact only established after resection. Macroscopically, hemangiomas resemble thymic or mediastinal mass lesions and their appearances are reminiscent of hemorrhagic cysts. Microscopically, however, many vessels lined by flat endothelial cells are noted, and the residual thymus gland tissue is usually evident within the mass as well (1-3).

Grossly, hemangiomas may mimic malignancy, but our patient was incidentally discovered to harbor the lesion.

Excision is usually the curative measure (2) unless there are multiple lesions (4). Hemangiomas are benign tumors; surgical resection of the lesion, therefore, bears

an excellent long-term prognosis (1).

Case Report

The case herein is a 70-year-old woman who underwent CABG due to coronary heart disease. During the operation, the thymic gland caught the attention of the surgeon in that it was bulky given the patient's age. Closer examination revealed the tumor to contain blood clots and it was, therefore, completely excised and sent to the surgical pathology department, with the impression being a hemorrhagic cyst of the thymic gland. The specimen consisted of a smooth encapsulated piece of tissue, which was brown in color, measured 6 × 5 × 3 cm, and weighed about 45 grams. In other words, the gland was too large for the patient's age.

On cutting, dark brown blood clots were conspicuous and a solid cystic appearance could be discerned, while the bulk of the thymus was attenuated (Figure 1).

Microscopically, variously-sized blood filled channels were noted, with flat lin-



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ings. There was also extensive fresh and old hemorrhage as well as organized thrombus formations; nevertheless, the remnants of the thymus gland could also be detected in the periphery (Figure 2).

There was no evidence of malignancy in this specimen, so a diagnosis of thymic cavernous hemangioma was established. The patient's surgical operation was fortunately uneventful, and she was soon discharged from the hospital in good clinical condition.



Figure 1) Gross view of the thymus gland is seen with dark brown blood clots and a solid cystic appearance.

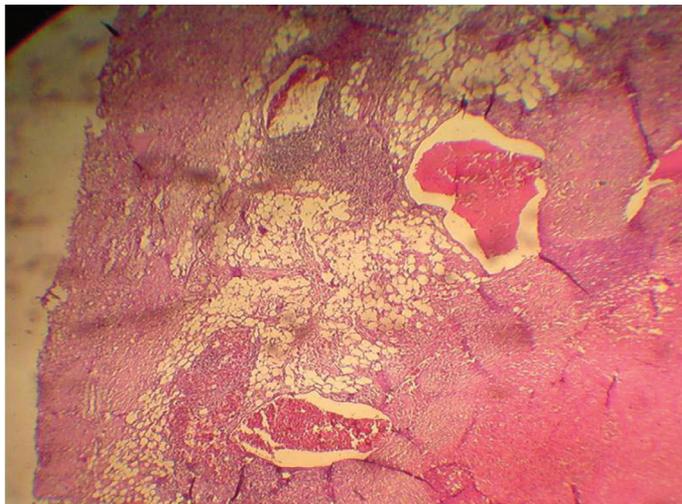


Figure 2) Microscopically, there are blood filled channels with flat linings, extensive hemorrhage, and organized thrombus formations (H&E, X 400).

Discussion

Hemangiomas are rare mediastinal neoplasms (0.5% of masses in that region). The diagnosis is in fact only estab-

lished after resection. What is more, their clinical manifestations include a wide spectrum of symptoms based on size as well as involvement of the adjacent organs. Macroscopically, they resemble thymic or mediastinal mass lesions; and after sectioning, their appearance is reminiscent of hemorrhagic cysts. Microscopically, however, they have a loose connective tissue with many thick-walled vessels, which are lined by flat endothelial cells. Cystic degeneration and extensive granulation tissue formation or thrombosis may also exist. The residual thymus gland tissue is usually evident within the mass (1-3), and there are also reports in the existing literature of the foci of thrombosis, calcification, and cholesterol granulomas (2).

In most of the cases reported, hemangiomas may mimic malignancy; however, our patient was incidentally discovered to harbor the lesion. While excision is usually the curative measure (2), it is deserving of note that multiple lesions may also be encountered (4). Hemangiomas are benign tumors, and surgical resection of the lesion confers an excellent long-term prognosis (1).

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References:

1. Papagiannopoulos, K. Sheppard, M. Thymic hemangioma presenting with recurrent pleural effusion: *Ann Thorac Surg* 2000;70: 297-299
2. Rosai J. Rosai and Ackerman's surgical pathology .9th edition, Edinburgh, Mosby company, 2004; pp.496
3. Toshizumi, S. Makoto, Y. A surgical case of cavernous hemangioma in the anterior mediastinum. *Journal of the Japanese Association for Chest Surgery*, VOL.15;NO.2;PAGE.136-139(2001)
4. Moran A.C., Suster S. Mediastinal hemangiomas. *Hum Pathol* 1995;26:416-421