CASE REPORT *Turkish Respiratory Journal* 2006; 7(3): 137-138

Thoracic Surgery

Hodgkin's Disease in the Thymic Cyst Wall: Report of a Case

Alpaslan Çakan[1], Ufuk Çağırıcı[1], Özgür Samancılar[1], Deniz Nart[2]

[1] *Ege University School of Medicine, Departments of Thoracic Surgery, Izmir, Turkey*
[2] *Ege University School of Medicine, Departments of Pathology, Izmir, Turkey*

Abstract
Hodgkin's disease of the thymus is well recognized as being associated pathologically with the formation of both microscopic and small macroscopic cysts. Primary thymic cysts of the mediastinum are uncommon. It is also rare for Hodgkin's disease to take the form of a small focus of tissue in the wall of a thymic cyst. We report a case of a thymic cyst associated with Hodgkin's disease.

Keywords: thymic, cyst, Hodgkin

Received: Feb 10, 2006 Accepted: Aug 25, 2006

INTRODUCTION

The coexistence of thymic cyst and mediastinal Hodgkin lymphoma is rare. The cause of thymic cysts is controversial. At present, most believe that these cysts are either congenital or originate from cystic dilation of bronchial pouch remnants. Some investigators believe the cysts are acquired lesions caused by an infection, immune-mediated pathogenesis, or trauma [1]. Okumura and associates and Van Schil and co-workers reported that congenital thymic cysts were benign, but differentiation from malignant cystic degeneration should be made [2,3]. Mediastinal involvement is seen in 60-70% of the patients with Hodgkin's disease and the most common histological form is the nodular sclerosing type [1,4]. In this study, we present a case with Hodgkin's disease which developed in a thymic cyst wall.

CASE PRESENTATION

An 18-year-old boy was admitted to our hospital with left-sided chest pain. Physical examination was normal, and there was no peripheral lymphadenopathy. Routine biochemical investigations were all within the normal range of values, except an erythrocyte sedimentation rate of 42 mm/h.

Chest roentgenogram showed a mass above the heart in the left hemithorax (Figure 1). A computed tomographic (CT) scan of the chest demonstrated an anterior mediastinal cystic mass with a diameter of 10 cm (Figure 2). Ultrasonographic examination of the mass revealed a cystic component. A CT of the abdomen was normal. A transthoracic fine-needle aspiration biopsy yielded yellowish serous fluid. The cytological examination of this fluid was benign.

We performed a median sternotomy to resect the lesion. An ovoid, yellowish-gray, anterior mediastinal cystic mass was partially adhered to the pericardium. It was full of turbid, yellowish fluid. The cyst and a part of the pericardium were completely excised. Histological examination revealed the combination of thymic cyst and nodular sclerosing Hodgkin's disease. The cyst was lined by cuboid epithelium. The Hodgkin's disease was seen in several nodules in the wall of the thymic cyst. Nodular sclerotic lymphoid tissues in the cyst wall were comprised of Reed-Sternberg and lacunar cells (Figure 3). After an uneventful postoperative period, the patient was discharged on the 8th postoperative day and was referred to the Oncology Department for chemotherapy.

DISCUSSION

The pathogenesis of thymic cysts in patients with Hodgkin's disease is not clear, but it can be explained by three possibilities: First, it may accompany mediastinal Hodgkin's disease; second, it may occur secondary to the radiation therapy for Hodgkin's disease; and finally it may form by the degenerative effect of the Hodgkin's disease itself [5,6,7].

The treatment of thymic cysts is also controversial. Some authors suggest that all should be removed to definitely diagnose the lesion. Others believe that if the diagnosis is strongly suggested by the location of the lesion and the presence of characteristic CT findings, nothing is required. If the possibility of an echinococcal cyst can be ruled out, a transthoracic fine-needle aspiration under CT guidance may be attempted for cure. If any doubt exists as to the true nature of the thymic lesion, surgical excision is indicated to establish a final histopathologic diagnosis [1,8]. We performed a fine needle aspiration biopsy to obtain some samples from the solid part of the mass to reach a diagnosis but could only get fluid samples, which were non-revealing, so we performed the operation.

Although the concurrent occurrence of thymic cyst and thymic carcinoma is very rare, Yamashita and colleagues sug-

Corresponding Author: Alpaslan Çakan, Ege Üniversitesi Tıp Fakültesi Göğüs Cerrahisi Anabilim Dalı İzmir Turkey, Phone: +90 232 3904919, E-mail: alpaslan.cakan@ege.edu.tr

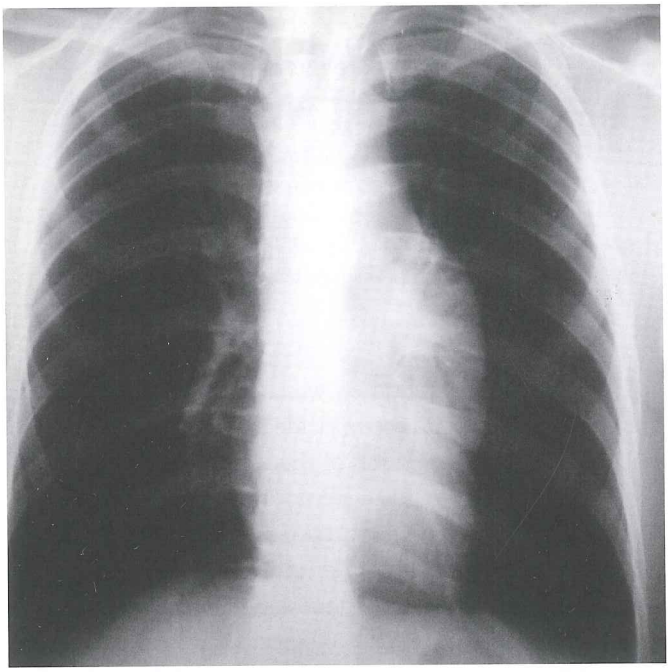

Figure 1. Chest roentgenogram showed a mass above the heart on the left.

gested that it should be added to the differential diagnosis in anterior mediastinal cystic masses [9]. Considering that a few thymic cysts are combined with malignant tumor, Shields and Asakura and associates reported that complete resection of the lesion was required either by a median sternotomy or by a video-assisted surgical technique in the treatment of thymic cyst [1,10].

Preoperatively, we could not find any peripheral lymphadenopathy by physical examination, so we did not have a chance to suspect and diagnose Hodgkin's disease in this case. A provisional diagnosis of a simple mediastinal cyst was

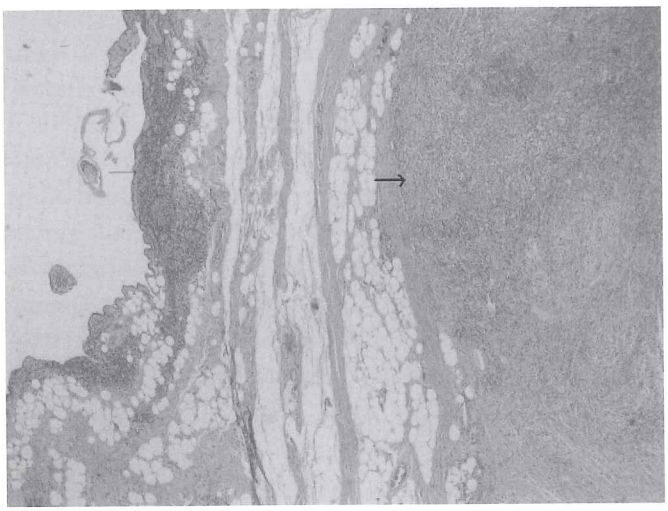

Figure 3. Histological appearance of cuboid lining of thymic cyst and Hodgkin's disease (thin arrow showing the thymic cyst epithelium, thick arrow showing Hodgkin's disease) (Hematoxylin and eosin x 100).

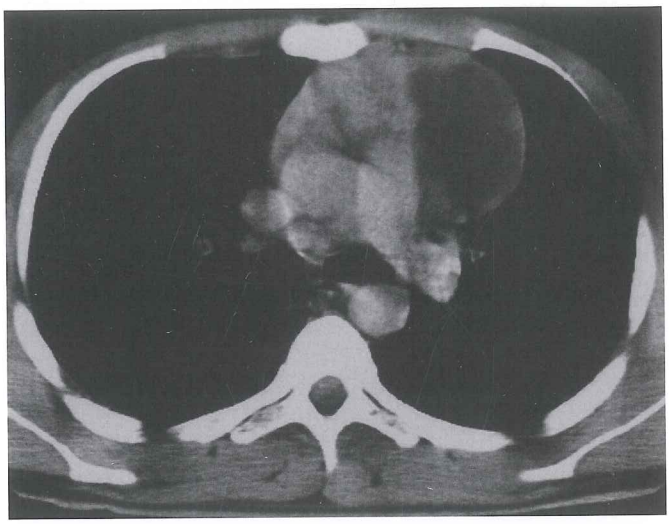

Figure 2. Computed tomographic scan of the chest revealed an anterior mediastinal cyst.

made based on the aforementioned clinical and radiological findings. Resection of the thymic cyst provided early and correct diagnosis of Hodgkin's disease.

CONCLUSION

We conclude that peripheral lymph node examination must be done carefully in patients having a mediastinal lesion, and the coexistence of Hodgkin's disease or any other malignant processes in mediastinal thymic cysts should be kept in mind.

REFERENCES

1. Shields TW. Mesothelial and other less common cysts of the mediastinum. In: Shields TW, LoCicero III J, Ponn RB, Eds. General Thoracic Surgery. 5th ed. Philadelphia. Lippincott Williams and Wilkins; 2000;2423-35.
2. Okumura S, Ohta T, Fujioka M et al. A case of multilocular thymic cyst with myasthenia gravis. Nippon Kyobu Geka Gakkai Zasshi 1995;43:917-21.
3. Van Schil P, Jorens P, Schoofs E, et al. Mediastinal thymic cyst. Thorac Cardiovasc Surg 1988;36:159-60.
4. Smith PLC, Jobling C, Rees A. Hodgkin's disease in a large thymic cyst in a child. Thorax 1983;38:392-3.
5. Lindfors KK, Meyer JE, Dedrick CG, et al. Thymic cysts in mediastinal Hodgkin disease. Radiology 1985;156:37-41.
6. Kim HC, Nosher J, Haas A, et al. Cystic degeneration of thymic Hodgkin disease following radiation therapy. Cancer 1985;55:354-6.
7. Lewis CR, Manoharan A. Benign thymic cysts in Hodgkin disease: report of a case and review of published cases. Thorax 1987;42:633-4.
8. Davis JW, Florendo FT. Symptomatic mediastinal thymic cysts. Ann Thorac Surg 1988;46:693-4.
9. Yamashita S, Yamazaki H, Kato T, et al. Thymic carcinoma which developed in a thymic cyst. Intern Med 1996;35:215-8.
10. Asakura S, Mori A, Katoh H, et al. Thoracoscopic treatment of mediastinal thymic cyst. Kyobu Geka 1994;47:861-3.