Mediastinal Cystic Lymphangioma: A Rare Mediastinal Tumour

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Abstract

A patient diagnosed as a case of mediastinal cystic lymphangioma, an extremely rare condition which is often diagnosed incidentally, is presented.

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Introduction

Lymphangioma, also called lymphatic cyst, cystic hygroma, or hygroma, is most commonly encountered in the cervical area (1). They are lesions of lymphatic origin which originate from the tissues sequestrating from lymphatic system during the early embryogenic phase. Mediastinal cystic lymphangiomas constitute only 1% of all mediastinal cystic tumors (2). The patient reported below represents an example of this rare condition.

Case Report

A 51-year-old woman who complained of coughing for the past 3 weeks was referred to our clinic. Her physical examination was unremarkable. Her chest x-ray showed an anterior mediastinal homogeneous mass. CT scan demonstrated a 22x47 mm anterior mediastinal cystic mass (Figure 1). Routine biochemical tests, lung function tests, and arterial blood gas levels were normal. The patient underwent surgery with a preliminary diagnosis of a pericardial cyst, a bronchogenic cyst or a thymic cyst.

A right standard posterolateral thoracotomy was performed through the fifth intercostal space. A cystic lesion was found on the pericardium and superior vena cava medially. There were no adherences to the adjacent structures and the lesion was excised totally. Pathologic examination of the obtained specimens confirmed the diagnosis of a lymphangioma with atypical lymphoid hyperplasia consisting of polyclonal B-lymphocytes and cells with normal T-cell antigen expression (Figure 2). The patient's postoperative course was uneventful and she was discharged on the 8th postoperative day.

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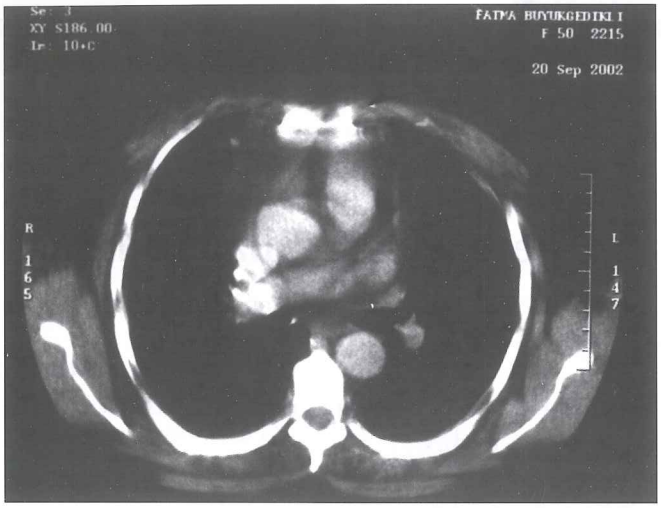

Figure 1. *Preoperative CT scan demonstrating the cystic lesion in the right anterior mediastinal region.*

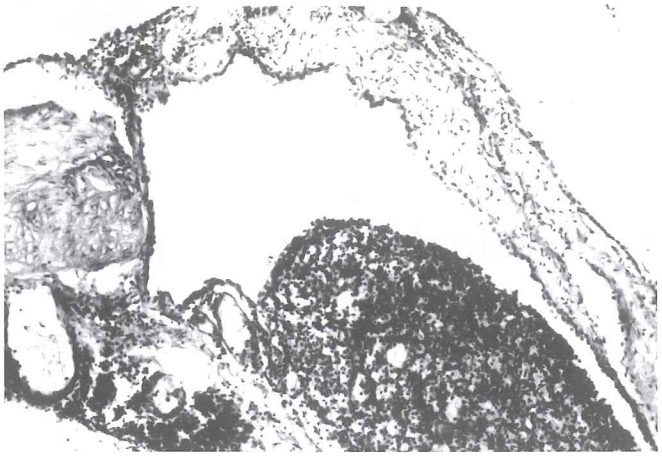

Figure 2. *Microscopic appearance of the lesion showing atypical lymphoid hyperplasia consisting of polyconal B-lymphocytes. (H:Ex100)*

Discussion

Lymphangiomas, also called cystic hygromas, lymphatic cysts, or chylous cysts are rare congenital abnormalities of the lymphatic vessels (3). They are benign tumours and malignant transformation has not been reported (4). These tumours are present at birth, but are not diagnosed because the patients are asymptomatic. Symptomatic cases are due to an infection, hemorrhage and/or progressive growing of the mass. In newborns and infants, respiratory distress may occur as a result of the compression of the tracheobronchial tract. Adult patients may present with pneumonia, superior vena caval syndrome, chylothorax, and chylopericardium (1,2). A persistent cough was the only symptom in our patient.

Intrathoracic cysts are mostly located in the superior mediastinum and may mimic clinically and/or radiologically intrathoracic goiters, lymphomas, thymomas, bronhcogenic cysts, or aneurysms of the brachiocephalic trunk (5).

A probable diagnosis is made by the detection of a cystic lesion in the chest radiograms and in computed tomography images. In the radiograms, mediastinal lymphangiomas are seen as round, well-circumscribed masses of homogenous density. To differentiate mediastinal lymphangiomas from other benign cystic mediastinal lesions such as bronchogenic, thymic and pericardial cysts is difficult, but low density lesions such as thymoma, lymphoma, and teratoma can easily be differentiated from lymphangioma (6-8). However, the definite diagnosis is reached by histopathological examination. On microsopic examination the lymphatic spaces are lined with an attenuated endothelium resembling the lymphatic structure. The spaces are filled with proteinaceous fluid containing lymphocytes and erythrocytes (Figure 2).

Treatment of lymphangiomas is primarily by surgical excision (5-7). The lesion, which may extend from the anterior mediastinum to the visceral mediastinum and from the cervical region to the diaphragm can usually not be excised totally, but the partial resection of the cyst may provide symptomatic relief (6). Chylotorax and recurrence may occur as postoperative complications due to incomplete excision. Other surgical complications are injuries to the phrenic nerve, the vagus, the lung, and the great vessels (3,7). Our patient had an uneventful postoperative recovery and no complications were encountered.

References

1. Sarıca E, Gülhan E, Demirdağ F, et al. Lenfanjiyomatozis (bir olgu nedeniyle). Solunum Hastalıkları 2002;13:130-32.
2. Wychulis AR, Payne WS, Clagget OT, Woolner LB. Surgical treatment of mediastinal tumors: A 40-year experience. J Thorac Cardiovasc Surg 1971;62:379-92.
3. Shahriari A and Odell JA. Cervical and thoracic components of multiorgan lympangiomatosis managed surgically. Ann Thorac Surg 2001; 71:694-96.
4. Nanson EM. Lymphangioma (cystic hygroma) of the mediastinum. J Cardiovasc Surg 1968;9:447-52.
5. Brown LR, Reiman HM, Rosenow EC, et al. Intrathoracic lymphangioma. Mayo Clin Proc 1986;61:882-92.
6. Wilson C, Askin FB, Heitmiller RF. Solitary pulmonary lymphangioma. Ann Thorac Surg 2001;71:1337-38.
7. Topcu S, Soysal Ö, Balkan E, et al. Mediastinal cystic lymphangioma: report of two cases. Thorac Cardiovasc Surg 1997;45:209-10.
8. İnci İ, Özçelik C, Eren Ş, et al. Primer mediastinal kist ve tümörler. Heybeliada Tıp Bülteni; 1996:2:52-7.