Mediastinal Cystic Hygroma: A Report of Two Cases

Gökhan Hacıibrahimoğlu, MD[1]; Mithat Fazlıoğlu, MD[1]; Levent Cansever, MD[1]; Nur Büyükpınarbaşılı, MD[2]; Mehmet Ali Bedirhan, MD[1]

Department of Thoracic Surgery, Yedikule Hospital for Chest Disease and Thoracic Surgery Center, İstanbul, Turkey
Department of Pathology, Yedikule Hospital for Chest Disease and Thoracic Surgery Center, İstanbul, Turkey

Abstract

Two cases of cystic hygroma in adults are presented. In the first case, the lesion was in the right paratracheal region, and in the second case in the left paracardiac region. Excision of the cystic mass was performed in both cases. The diagnosis of cystic hygroma was confirmed by histological examination. The mediastinal type of cystic hygroma is rare and is usually not discovered until adulthood. Thorax computed tomography findings are not specific. There is no effective treatment other than surgical excision.

Turkish Respiratory Journal, 2004;5:(2):121-123

Keywords: *cystic hygroma, intrathoracic, surgery*

Introduction

Cystic hygroma, (synonyms: lymphangiomas, lymphatic cysts, or chylous cysts) are congenital abnormalities of the lymphatic vessels. They are generally classified according to the size of their lymph channels as capillary-sized (simple), larger dilated spaces (cavernous), and large multilocular cystic structures (cystic hygroma) (1,2). About 75% of cystic hygromas occur in the neck and 20% in the axillae. Rare locations for all types of lymphangiomas include the mesentery, spleen, mediastinum, thoracic wall, inguinal region, cheek, tongue, retroperitoneum, bone, and extremities. Isolated mediastinal involvement accounts for less then 1% of cases of cystic hygroma and is most common in the adult age group.

Case Reports

Case 1: A 64-year-old male patient was admitted to our hospital for evaluation of an enlarging right superior mediastinal lesion. Three years ago, because of an epidermoid larynx cancer, the patient had undergone a total laryngectomy and also a radical neck dissection. Later, he received chemotherapy and radiotherapy. Physical examination revealed dysphonia, due to the tracheostomy. Apart from this, the patient was entirely asymptomatic. The thorax CT showed a lesion, cystic in appearance, 3 cm in diameter and located in the mediastinal area, at the right paratracheal region (Figure 1). Fiberoptic bronchoscopy revealed the presence of a convexity at the lower 1/3 of the trachea, on the right side. The lesion was considered to be a metastatic lesion. Howe-

Corresponding Author: *Dr. Gökhan Hacıibrahimoğlu*
Nispetiye Cad. Profesörler Sitesi C3A blok
No: 66/8, 34337 Etiler, İstanbul, Türkiye
Phone : +90 (212) 358 51 81
Fax : +90 (212) 351 50 35
E-mail : g.haciibrahim@yahoo.com

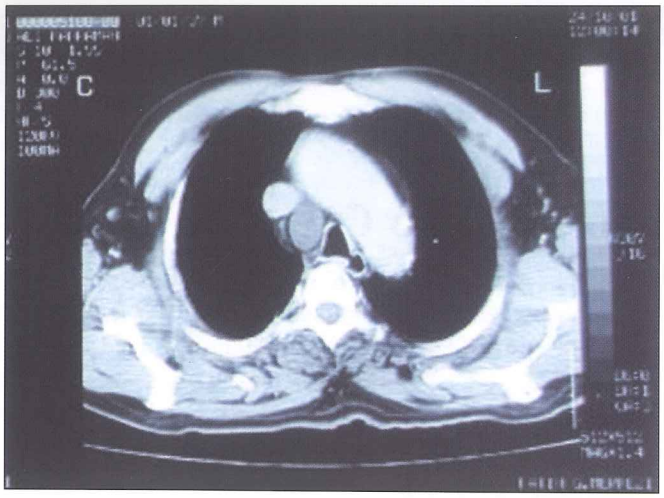

Figure 1. *Thorax computed tomography of Case 1, depicting the cystic nature of the mass and location in the paratracheal region.*

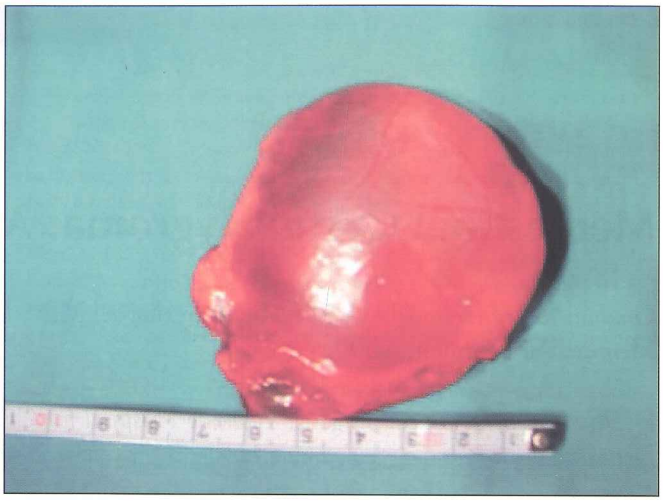

Figure 2. *The surgical specimen of Case 2.*

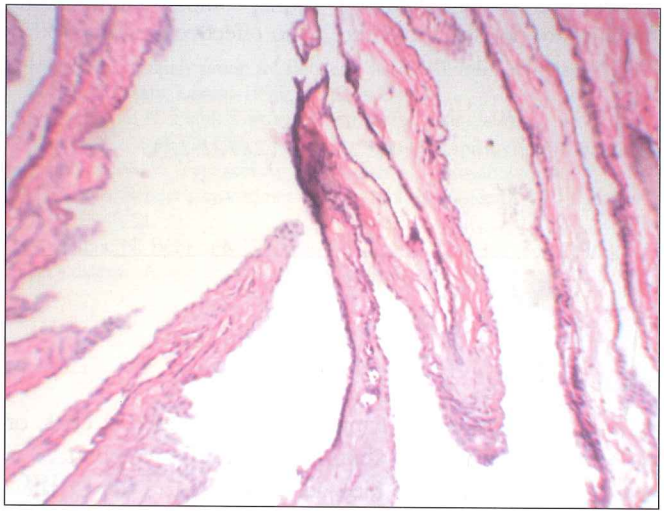

Figure 3. *The histological appearance of the hygroma in Case 2.*

ver, a systematic evaluation by cranial and abdominal CT and bone scan showed no signs of metastatic lesions. At thoracotomy, a cystic mass was found lateral to the trachea and posterior to the *vena cava superior*. It was removed totally and the patient had an uneventful postoperative course. The clear fluid-filled cyst measured 4x2x2 cm and was unilocular. The final pathologic diagnosis was cystic hygroma.

Case 2: A 55-year-old female patient was admitted to our hospital with symptoms of slight cough and disturbance in breathing. The physical examination was essentially negative. The chest roentgenogram showed the presence of a rounded mass of 5x3 cm at the paracardiac region on the right side. Thorax CT revealed that the lesion was of a cystic nature. The result of fiberoptic bronchoscopy was normal. At surgery, a cystic lesion of 6x4x4 cm was detected in the paracardiac region near to the diaphragm and the cyst was removed (Figure 2). The postoperative course was uneventful. Histologically, the cyst consisted of a single layer of flattened endothelium with varying amounts of fibrous tissue (Figure 3). The postoperative pathologic diagnosis was cystic hygroma.

Discussion

Cystic hygroma are rare benign lesions of lymphatic origin and represent 0.7% to 4.5% of mediastinal tumors. Most are present at birth and are detected in the first two years of life. Patients may be asymptomatic, but compression of mediastinal structures can result in chest pain, cough, or dyspnea. Because of a tendency for local growth, surgery is recommended. Cystic hygroma can be seen in adults, with or without a history of incomplete resection as a child. In adults, it is common for cystic hygroma to be localized to the mediastinum.

Most authorities consider cystic hygroma to be congenital malformations of the lymphatic system which probably arise from either sequestrations of primitive embryonic lymphatic tissue or from a congenital blocking of the regional lymph drainage (1,3). Macroscopically, these lesions are soft and fluctuant. They are not encapsulated and the margins are not discrete. Histologically, cystic hygromas are characterized as thin-walled structures containing clear watery fluid showing no microscopic features. They may be either unilocular or multilocular, and contain either serous or chylous fluid. Sometimes thin septations within the mass can be seen (4).

Cystic hygromas, rarely encountered in the mediastinum, are mostly located in the anterior and superior part of the mediastinum. They are apparently more common on the right side. For this reason, the surgical approach is most often by a right thoracotomy incision. Infrequently, a portion of the cyst is in close proximity to the trachea. The lesion usually causes no symptoms until it compresses the trachea or a bronchus sufficiently to cause partial obstruction of the air passage. Then wheezing may be noted. Malignant transformation has not been reported in cystic hygromas, and there have been no cases of spontaneous regression (5). Cystic hygromas may mimic thymomas, lymphomas, bronchogenic cysts, intrathoracic goiters, neurofibromas, or an aneurysmal dilatation of the brachiocephalic trunk.

Many patients including ours, present with nonspecific

symptoms and a chest radiograph reveals a mediastinal mass or a widened mediastinum (3). On CT, cystic hygromas usually present a homogenous image suggestive of a cyst, but there may be a combination of fluid, solid tissue and fat. Calcification is rare. Although they are usually well-circumscribed and localized, they may also appear to envelop the mediastinal structures (6,7).

Treatment of mediastinal cystic hygromas consists of the lesion removal. This is performed by thoracotomy and median sternotomy, as in our patients. VATS was performed in some cases (8,9,10).

References

1. Feutz EP, Yune HY, Mandelbaum I, Brashear RE. Intrathoracic cystic hygroma. Radiology 1973;108:61-66.
2. Brown LR, Reiman HM, Rosenow III EC, Gloviczki PM, Divertic MB. Intrathoracic lymphangioma. Mayo Clin Proc 1986;61:882-892.
3. Shahriari A, Odell JA. Cervical and thoracic components of multiorgan lymphangiomatosis managed surgically. Ann Thorac Surg 2001;71:694-696.
4. Pachter MR, Latters R. Mesenchymal tumors of the mediastinum: tumors of lymph vascular origin. Cancer 1963;1:108-117.
5. Bill AH, Summer DS. A unified concept of lymphangioma and cystic hygroma. Surgery, Gynecology & Obstetrics 1965;1:79-86.
6. Shaffer K, Rosado-de christenson ML, Patz EF Jr, Young S Farver CF. Thoracic lymphangioma in adults: CT and MR imaging features. AJR 1994;162:283-289.
7. Miyake H, Shiga M, Takai H, et al. Mediastinal lymphangiomas in adults: CT findings. J Thorac Imaging 1996;1:83-85.
8. Michel JL, Revillon, Y, Montupet P, et al. Thoracoscopic treatment of mediastinal cysts in children. J Pediatr Surg 1998;33(12):1745-8.
9. Menth M, Balmer MC, Ris HB. Blunt thoracic trauma with hemorrhage into mediastinal lymphangioma-case report. Swiss Surg 1998;4(2):58-60.
10. Matsuzoe D, Iwasaki A, Hideshima T, et al. Postoperative chylothorax following partial resection of mediastinal lymphangioma: report of a case, Surg Today 1995;25(9):827-9.