Gülhane Tıp Dergisi 2008; 50: 50-52

OLGU SUNUMU/CASE REPORT

A case of symptomatic giant paracardiac hydatid cyst

Cem Köz (*), Mehmet Uzun (*), Mehmet Yokuşoğlu (*), Bilgehan Savaş Öz (**), Oben Baysan (*)

Summary
Diagnosis of paracardiac masses is problematic in clinical practice, and they may remain asymptomatic for a long period. We herein report a case of mass posterior to the heart in a 57-year-old male. Computed tomography examination showed a thin-walled cystic mass containing liquid, suggesting a relationship with pericardium at first. Further examination with transthoracic and transesophageal echocardiography revealed that paracardiac mass did not have any relationship with heart structure. The patient underwent thoracic surgery and the pathologic examination revealed that the mass was an echinococcus cyst.
Key words: Computed tomography, cyst hydatid, echocardiography, giant paracardiac mass

Özet
Semptomatik dev bir parakardiyak kist hidatik olgusu
Parakardiyak kitlelerin tanısı klinik uygulamada problem olmaktadır ve bu kitleler çok uzun süre asemptomatik olarak kalabilir. Bu olgu sunumunda 57 yaşında erkek hastada kalbin posteriyorundaki bir kitleyi sunuyoruz. Bilgisayarlı tomografik incelemede ilk bakışta perikardla ilişkili olduğunu düşündüren ince duvarlı, mayi içeren kistik kitle saptandı. Transtorasik ve transözefageal ekokardiyografik incelemelerde parakardiyak kitlenin kalp yapıları ile ilişkisi olmadığı görüldü. Torasik cerrahiye verilen hastanın patolojik değerlendirmesi kitlenin ekinokok kisti olduğunu ortaya koydu.
Anahtar kelimeler: Bilgisayarlı tomografi, kist hidatik, ekokardiyografi, dev parakardiyak kitle

* **GATF Kardiyoloji AD**
****GATF Kalp Damar Cerrahisi AD**

Ayrı basım isteği: Dr. Mehmet Yokuşoğlu, GATF Kardiyoloji AD, Etlik 06018, Ankara
E-mail: myokusoglu@gata.edu.tr

Makalenin geliş tarihi: 26.03.2007
Kabul tarihi: 14.05.2007

Introduction

The diagnosis of paracardiac masses is one of the mostly encountered difficulties in clinical practice. Such patients are frequently misdiagnosed as dyspnea of pulmonary origin unless a detailed examination is performed. Pericardial cyst is the most common benign paracardiac mass lesion, and typically located along the right cardiophrenic angle. Slowly enlarging echinococcal cysts generally remain asymptomatic until their expanding size or their space-occupying effect elicits symptoms in an involved organ. The liver and lungs are the most common sites of these cysts. Since a period of years elapses before cysts enlarge sufficiently to cause symptoms, they may be discovered incidentally on a routine x-ray or ultrasonographic study.

In this case report, we present a case of paracardiac mass, which had been followed as obstructive lung disease until echocardiography revealed and computerized tomography (CT) confirmed the presence of a cystic structure just adjacent to the right and left atria. The importance of imaging techniques in such cases is also discussed.

Case Report

A 57-year-old man had admitted to the pulmonologist because of exertional dyspnea, cough, and positional chest pain. His history revealed that he had been treated for chronic obstructive pulmonary disease for 15 years. He denied systemic diseases including hypertension, diabetes mellitus or previous chest trauma. The chest pain was not suggestive of angina pectoris and not associated with exertion. The chest roentgenogram and standard surface ECG were normal. The patient was

referred to cardiologist for further evaluation. His physical examination was normal except for 1/6 grade systolic murmur best heard at mesocardium. The patient underwent echocardiographic examination in order to evaluate cardiac functions. On apical four chamber view a mass was visualized totally adjacent to the left and right atria (9x12 cm) (Figure 1), and on subcostal

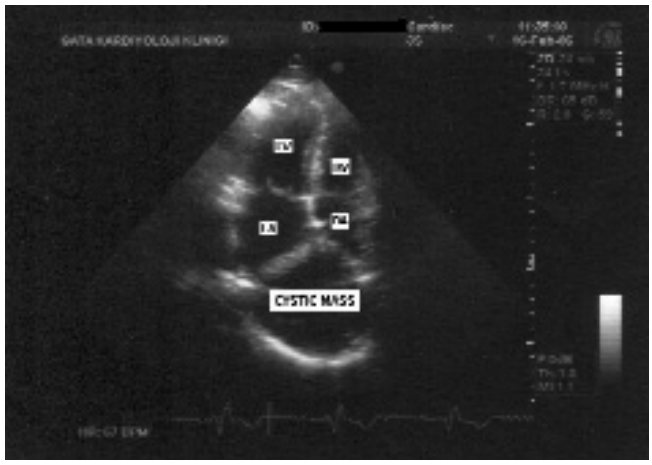

Figure 1. Apical four chamber view of transthoracic echocardiography. LV; left ventricle, LA; left atrium, RV; right ventricle, RA; right atrium

view, a smooth paracardiac mass adjacent to the left atrium was noticed (Figure 2). Cardiac structures and

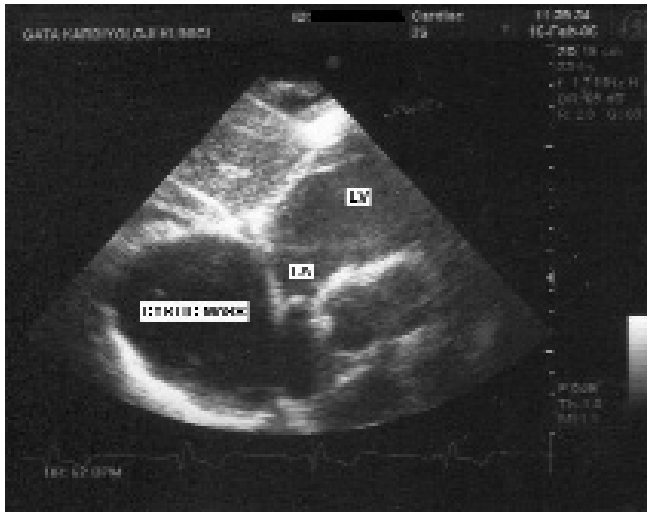

Figure 2. Subcostal view of transthoracic echocardiography. LV; left ventricle, LA; left atrium

functions were assessed normal. Thoracic CT revealed a cystic mass occupying the aortapulmonary window (Figure 3). There were no signs of aortic aneurysm, hemothorax or pneumomediastinum. Subsequent serologic tests for hydatidosis (indirect hemagglutination tests) were positive for echinococcus granulosus with marked eosinophilia. The patient underwent surgery. The patient was prepared for the operation and

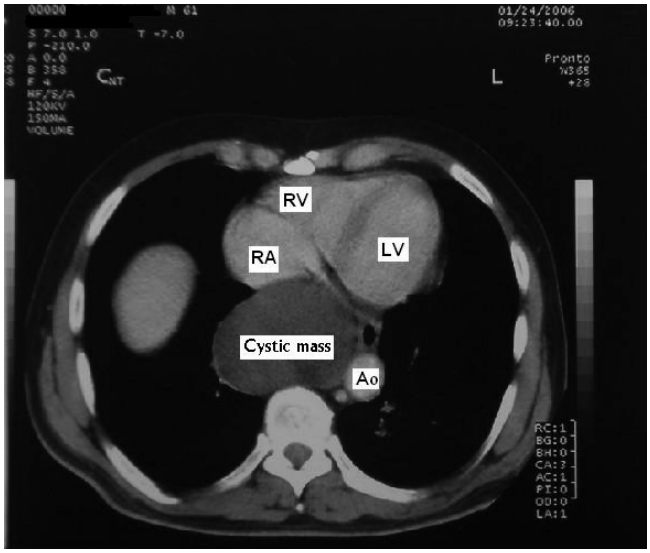

Figure 3. Computed tomography of the patient. LV; left ventricle, RV; right ventricle, RA; right atrium, Ao; Aorta

after median sternotomy an inverse Y shaped pericardiectomy was done, and a 7x6x11 cm cyst was seen on the right and left atrial walls of the heart. With a surgical blade the calcified pericystic layer was incised and cyst content was taken away completely with a large injector having a wide needle. After the aspiration of all fluid content NaCl 20% solution was injected into the cyst. Five minutes later this solution was aspirated through the same place at one time. With a gentle cut, the incision line in pericystic layer was extended without harming the cyst pouch. The cyst pouch was taken out by forceps. The cavity was washed out again and left open. After the operation albendazol therapy was continued in the intensive care unit. The patient was discharged from the hospital on the 5th postoperative day with the same medication and pathologic examination confirmed that the mass was an echinococcus cyst.

Discussion

Benign paracardiac masses might be originated from lung, lymph node, pleura, pericardium or vascular structures. Pericardial cyst is the most common benign paracardiac mass lesion (1).

Paracardiac masses may alter the cardiac contour on roentgenograms of the chest so as to mimic configurations associated with cardiac disease. Although many uncommon locations have been reported, the disease is rarely present in mediastinum. Large mediastinal hydatid cyst may compress the vital organs and produces pressure symptoms. These symptoms are similar to those of the other mediastinal cystic lesions. Differentiations may be impossible even with sophisticated radiological imaging techniques (2). Echocardio-

graphy and CT allow visualization of the paracardiac masses. CT is less precise in defining highly mobile structures, more expensive and difficult to perform in patients with orthopnea. However, identification of a pericardial cyst on CT is a simple task based on its well-circumscribed nature, its fluid attenuation and its relationship to the pericardium. Echocardiography is easy to perform and gives real time images. In addition, it may provide information about the structural and functional effects of paracardiac masses on heart. However, localization and nature of the mass may limit this advantage, such as, if anteriorly localized, mass may hamper the image. Solid and air-filled lesion may prevent structural relation between mass and heart. On this occasion, transesophageal echocardiography may surpass this limitation. Visualization of mediastinal and thoracic structures adjacent to the heart is difficult by echocardiography (3). In addition, it often fails to provide a complete view of the mass and involved structures to aid in its full definition. Consequently, magnetic resonance imaging, CT and echocardiography are diagnostic modalities in evaluating the paracardiac masses adjacent to the heart with different accuracy (3-6).

In conclusion, the present case is important for considering the paracardiac mass by transthoracic echocardiography and transesophageal echocardiography imaging according to structural and functional hemodynamic nature.

References

1. Schvartzman PR, White RD. Imaging of cardiac and paracardiac masses. J Thorac Imag 2000; 4: 265-273.
2. Gozubuyuk A, Oz BS, Gurkok S, et al. Unusually located thoracic hydatid cysts. Ann Saudi Med J (In press).
3. Mundinger A, Gruber HP, Dinkel E, et al. Imaging in cardiac mass lesions. Radiat Med 1992; 10: 135-140.
4. Lund JT, Ehman RL, Julsrud PR, Sinak LJ, Tajik AJ. Cardiac masses: assessment by MR imaging. AJR Am J Roentgenol 1989; 152: 469-473.
5. Bruna J, Lockwood M. Primary heart angiosarcoma detected by computed tomography and magnetic resonance imaging. Eur Radiol 1998; 8: 66-68.
6. Kucukaslan N, Oz BS, Demirkilic U, et al. An asymptomatic cardiac echinococcus cyst case: a case report. The Internet Journal of Thoracic and Cardiovascular Surgery. 2005;7.