## Mass surrounding the heart: Findings of transthoracic echocardiography and computed tomography

Kalbi çepeçevre saran kitle: Ekokardiyografi ve bilgisayarlı tomografi bulguları

Yalcin Velibey, M.D., Metin Cagdas, M.D., Nazmi Calik, M.D., Hulya Kasikcioglu, M.D.

Siyami Ersek Thoracic and Cardiovascular Surgery Training and Research Hospital, Cardiology Clinic, Istanbul



A 31-year-old man presented with complaints of dyspnea which has lasted for one week. Physical examination revealed his blood pressure to be 125/85 mmHg, her heart rate to be 95 beats/min and in sinus rhythm. No murmur or heart sound was detected on auscultation. Breath sounds were found to be decreased at the basal segment. A posterior-anterior chest X-ray of the patients revealed bilateral pleural effusion and cardiomegaly. Transthoracic echocardiography revealed a 4.5 cm mass surrounding the apex of the heart and obstructing ultrasound waves. Pericardial effusion of 0.9 cm was also found to surround the whole heart (Figure A, B). All valves and the ejection fraction were found to be normal. There was a >25% respiratory variation of mitral inflow on Doppler echocardiography (Figure C). A computed tomography performed for better evaluation of the location of the mass revealed a solid mass lesion with irregular margins and heterogeneous



structure, consisting of patchy cystic and fat density areas. The mass was observed to originate from the prevascular region in the anterior mediastinum, extending to the craniocaudal region for approximately 17.5 cm of the segment and surrounding the heart and pericardium, with margins obscured by the pericardium and measuring 16x7 cm at the widest area (Figure D). A sternotomy with midsternal incision was performed at the thoracic surgery clinic where the cyst was excised and sent for pathological evaluation. The patient was later referred to the oncology clinic following diagnosis of lymphoma from the pathologic investigation.



**Figures.** (**A**, **B**) Transthoracic echocardiography image showing a 4.3 cm mass surrounding the apex of the heart and obstructing ultrasound waves (**C**) Tissue Doppler echocardiography showing a more than 25% respiratory variation of mitral inflow (**D**) Computed tomography showing a solid mass lesion with irregular margins and heterogeneous structure, consisting of patchy cystic and fat density areas and surrounding the heart and pericardium with margins obscured by the pericardium and measuring 16x7 cm at the widest area. Bilateral pleural effusion is also observed.