Consolidated Lung Misdiagnosed as Thrombus and Dissection of Descending Aorta: Differential Diagnosis

Trombüs ve Desendan Aort Diseksiyonu Olarak Yanlış Tanı Konulan Konsolide Akciğer

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Geliş Tarihi/*Received:* 22.07.2008
Kabul Tarihi/*Accepted:* 23.11.2008

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ABSTRACT Transesophageal echocardiography is the reference method for many diseases of descending aorta. It provides an excellent view of descending aorta and adjacent areas. However, it may lead to misdiagnosis if small clues are overlooked. The 67 year-old male patient was admitted to the coronary care unit as a survivor of cardiac arrest. Transthoracic and transosephageal echocardiography revealed a giant aortic aneurysm with an echo-free area, containing a mobile mass, first diagnosed as thrombus and dissection . Computerized tomography was performed and yielded a pathology, which was more consistent with consolidated lung lobules rather than thrombus and dissection. Here, we present a case, in which the pleural effusion with consolidated lung has been misdiagnosed as dissecting aneurysm of descending aorta with a huge thrombus.

Key Words: Pulmonary atelectasis; echocardiography, transesophageal; dissection; thrombosis

ÖZET Desendan aortada görülen birçok hastalık için transözofageal ekokardiyografi referans metoddur. Desendan aorta ve komşu bölgeler ile ilgili mükemmel görüntüler sağlar. Ancak, bazı ipuçları gözden kaçırılırsa bu bazen yanlış tanı konulmasına neden olabilir. Altmış yedi yaşında erkek hasta kardiyak arrest tanısıyla koroner yoğun bakım ünitesine yatırıldı. Transtorasik ve transözofageal ekokardiyografik incelemeyle dev aortik anevrizma ile eko bulunmayan, içerisinde mobil kitle bulunan ve ilk olarak trombüs ve diseksiyon olarak teşhis edilen kitle saptandı. Kompüterize tomografi uygulandığı zaman trombüs ve diseksiyondan ziyade patolojinin konsolide akciğer lobülleri ile uyumlu olduğu saptandı. Bu yazıda plevral efüzyon ile beraber konsolide akciğerin yanlışlıkla desendan aort diseksiyonu ile dev trombüs olarak yanlış teşhis edildiği bir olguyu sunuyoruz.

Anahtar Kelimeler: Atelektazi; transözofageal ekokardiyografi; diseksiyon; tromboz

Turkiye Klinikleri J Cardiovasc Sci 2009;21(1):124-6

Transesophageal echocardiography (TEE) is the reference method for many pathologies of descending aorta.[1] It provides an excellent view of descending aorta and adjacent areas. However, some rare entities may cause false diagnosis if small clues are overlooked. Here, we present a case, which have important implications for echocardiographers.

The 67 year-old male patient was admitted to the coronary care unit as a survivor of cardiac arrest. His electrocardiogram revealed acute inferior myocardial infarction. The transthoracic echocardiography revealed a giant aortic aneurysm. For a possible emergency surgery for aortic aneurysm and coronary revascularization, coronary angiography was performed but coronary arteries could not been viewed due to huge ascending aorta. As gu-

idance for future treatment, and relative contraindication for taking patient outside the coronary care unit because of acute myocardial infarction, TEE was performed. Lateral to the descending aorta, there was an echo-free area, containing a mobile mass (Figure 1). The echo-free area and the mass were extending through the abdomen until the TEE view was lost. We also recorded a low velocity flow by color Doppler echocardiography in the area. At 45 cm from teeth, a turbulent flow, which might be the flow through the orifice of false lumen, was recorded (Figure 2). Given the presence of huge ascending aortic aneurysm, history of uncontrolled hypertension, cardiopulmonary resuscitation (a possible cause of a chest trauma) and recent coronary angiography (catheter-induced dissection?), the primary TEE diagnosis was recently-developed dissecting aneurysm with a huge thrombus in it. However, the TEE diagnosis was still suspicious because the orifice of false lumen was not typical. Therefore, computerized tomography (CT) was performed. The CT imaging confirmed that there is a radiolucent area lateral to the descending aorta (DA); however, the mass in the area was not typical of a thrombus, instead, the image was more consistent with consolidated lung lobules (Figure 3 and 4). A common meeting was held by cardiologists and radiologists in order to identify the case. During the common examination, the TEE and CT images were reevaluated. This time, some additional clues were sought. The circular appearance of the DA, which was firstly thought to be flap, the shadowing of air in the mass in the echo-free area was noted. All these findings were consistent with a normal DA with pleural effusion just anterior to it. The mass was a consolidated lung tissue as evident by air bronchograms in the mass.[2]

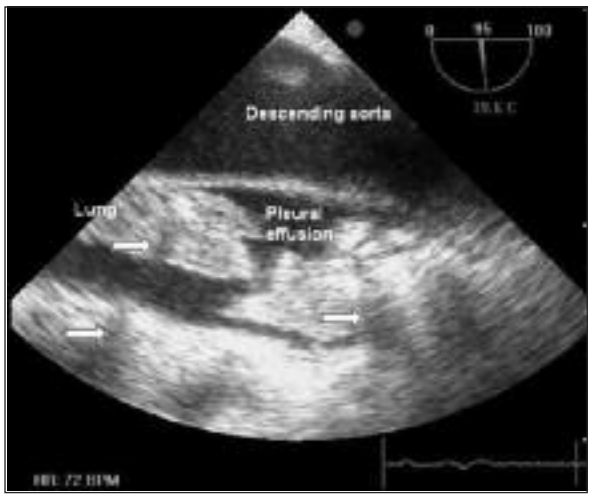

FIGURE 1: Descending aorta and a echo-free area with a mass in it. The air bronchograms (arrows) within the mass are noted.

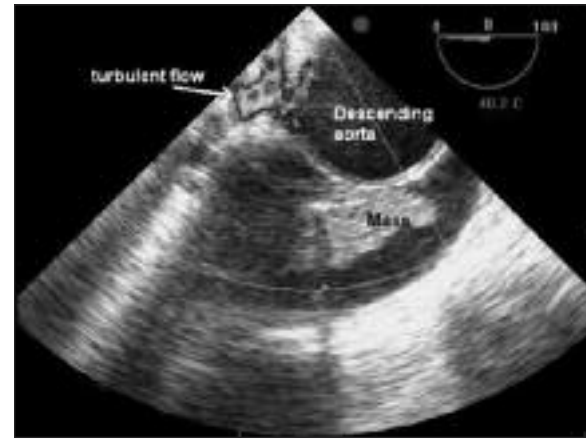

FIGURE 2: A turbulent flow adjacent to the lumen of descending aorta is noted.

FIGURE 3: Computerized tomographic image of the descending aorta and adjacent tissues. The radioluscent area posterolateral to the descending aorta is noted. There is mass within the area.

DISCUSSION

Dissecting aneurysms of the DA is one of the most important abnormalities that require rapid diagnosis and treatment. Transesophageal echocardiography, as a powerful tool for diagnosing aortic pathologies in intensive care units, provides the definite diagnosis in most cases. However, in some ca-

FIGURE 4: Computerized tomographic image of the descending aorta and adjacent tissues. The mass is extending through the diaphragm

ses, the differential diagnosis of dissection is difficult due to rare pathologies of adjacent organs or linear artifacts.[3] The criteria for differentiating from linear artifacts are well defined by Vignon et al.[4] In this case, linear artifact was not suspected, therefore, these criteria were overlooked. In our case, the accompanying aneurysm of ascending aorta, history, presence of acute myocardial infarction, the presence of a flow resembling orifice of false lumen and recording flow in the echo-free area had lead us the misdiagnosis of dissecting aneurysm. However, after a careful examination, some clues, such as air-bronchograms in the mass, immobility of the wall, which was once thought as flap, were noticed, and the diagnosis was substituted to pleural effusion with consolidated of lung.

In conclusion, we recommend our colleagues that every TEE examination should be evaluated carefully before establishing a diagnosis. Some little clues may have important effects on the diagnosis.

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