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An ascending aort dissection detected in transthoracic echocardiography as a posteriorly located mass

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SUMMARY

A patient with aortic dissection generally has symptomatic presentation, however in an asymptomatic case the diagnosis is usually based on incidentally detected findings. We herein present a case of aortic dissection in a 68-year-old female patient detected as a posteriorly located mass in transthoracic echocardiography without overt symptoms.

Key words: *Aortic dissection, computed tomography, echocardiography*

ÖZET

Transtorasik ekokardiyografide posteriyor yerleşimli kitle olarak belirlenen asendan aort disseksiyonu

Aort disseksiyonu olan olgular genellikle semptomatiktir, ancak asemptomatik olgularda tanı genellikle tesadüfen saptanan bulgulara dayanmaktadır. Bu yazıda belirgin semptomları olmayan 68 yaşında bir kadın hastada transtorasik ekokardiyografide posteriyor yerleşimli kitle görümü veren aort disseksiyonu sunulmaktadır.

Anahtar kelimeler: *Aort disseksiyonu, bilgisayarlı tomografi, ekokardiyografi*

Introduction

A patient with aortic dissection generally has symptomatic presentation including abrupt onset chest or back pain (1). Unfortunately, the diagnosis of an aortic dissection in an asymptomatic patient, by definition, is usually based on incidentally detected findings. Some dissecting aneurysms may reach to a very large size (2). We herein present an asymptomatic patient with type A aortic dissection detected on routine echocardiographic examination as a posteriorly located mass and confirmed by further diagnostic studies.

Case Report

A 63-year-old female patient admitted to our outpatient clinic for a routine control. Her past medical history revealed the presence of previous coronary angiogram which showed slow flow in left anterior descending artery four years ago. Since that time, she has used a beta blocker and acetylsalicylic acid (100 mg once a day) without any complaint. Her vital signs were normal and a diastolic murmur at the left sternal border was detected during physical examination. During transthoracic echocardiography (Philips Envisor C, Philips Medical Systems, Andover, MA, USA) a moderate degree aortic regurgitation and a mild degree mitral regurgitation with normally functioning left ventricle were demonstrated. Furthermore, a mass located at the posterior aspect of the heart reaching 8 cm diameter was detected at apical four chamber view. Right parasternal view was tried for better understanding of the problem, which indeed revealed a dissection flap beginning at the proximal ascending aorta, a large false lumen and a small true lumen (Figure 1). However, entry and exit points of dissection were not confirmed in transthoracic echocardiography views, and hence, transesophageal echocardiographic (TEE) study (Philips I33 machine) was performed. TEE revealed the presence of

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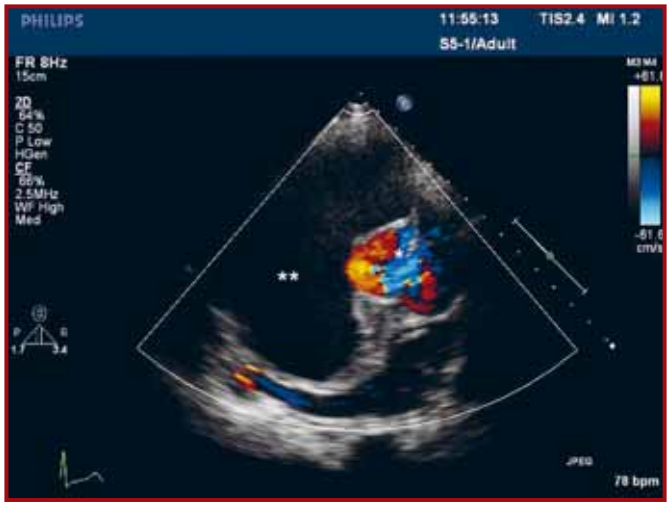

Figure 1. Transthoracic right parasternal view showing a small true lumen* and a large false lumen**

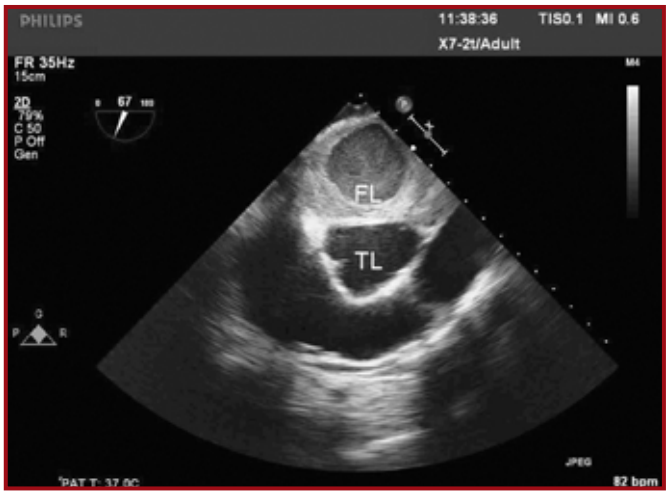

Figure 2. Transesophageal echocardiographic view with true (TL) and false (FL) lumens

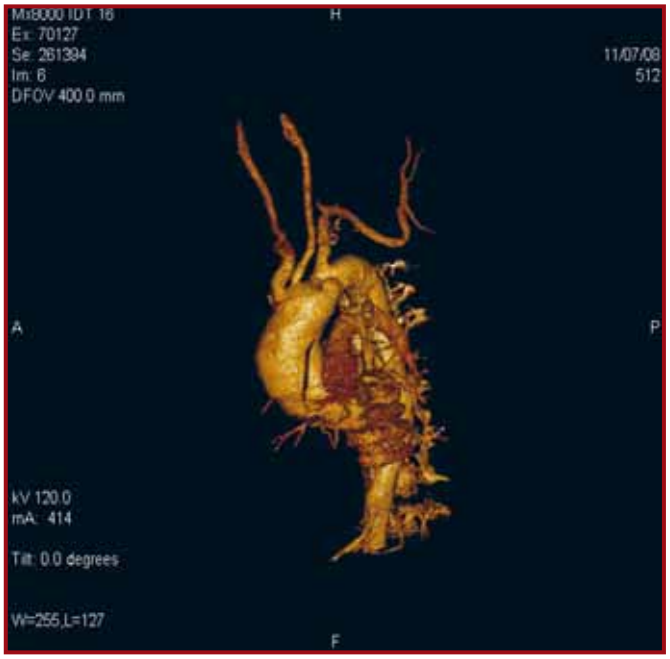

Figure 3. Computed tomography: 3D reconstruction

aortic dissection starting from a point 4 cm distal to sinotubular junction with very prominent swirling spontaneous echo contrast (Figure 2). Descending aorta had normal diameter and appearance. We ordered a computed tomography (CT) study because we were not able to conceptualize the dissection and aortic lumen relation. Multi-detector CT was very helpful, which showed very large false lumen with inferoposteriorly oriented outpouching. Interestingly, this dissection oriented in a spiral-like direction and wrapped around true lumen to the point of left subclavian artery (Figure 3). Based on these findings we transferred the patient to another center for surgical intervention.

Discussion

A cardiac mass located at close vicinity to posterior aspect of heart can be caused by various etiologies including descending aortic aneurysm (3) and Valsalva sinus aneurysm (4). However, a dilated ascending aorta as a cause in such a situation is not an expected finding because of anterior location of this structure. Interestingly, the patient did not have a previous history of predisposing factors such as hypertension, atherosclerosis, aortic aneurysm or cardiac surgery. We questioned the patient about her relatives again after the diagnosis and revealed that her brother was operated for aortic aneurysm and dissection 13 years ago. We thought that a familial predisposition may be possible in our case because up to 19% of patients who present with a thoracic aneurysm or dissection have a first-degree relative with a similar history (1). We also were not able to exclude iatrogenic aortic dissection related to previous coronary angiography. However, if it is the case, the presence of a 4-year time period without symptoms is an unexpected course according to our opinion. Although endovascular repair is possible especially in type B dissections, surgical therapy is generally advocated in chronic type A dissections with aneurysmal dilatation as in our patient because of poor outcome (5), but it requires high surgical experience which was the underlying factor for our decision to transfer the patient. In conclusion, an aortic dissection with aneurysmal dilatation can be detected in routine transthoracic echocardiography as a mass which should always be kept in mind for the differential diagnosis.

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