

## An intracardiac mobile mass: ruptured left-ventricular false tendon with big vegetation due to Brucella endocarditis

*Kalp-içi hareketli kitle: Brucella endokarditi nedeniyle kopmuş büyük vejetasyonlu sol ventriküler tendon*

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### Introduction

Heart valves are most commonly affected by Brucella endocarditis (BE), but the involvement of left-ventricular false tendon (FT) has not been reported, yet. We report the case of the ruptured left-ventricular FT with big vegetation due to BE.

### Case Report

A 42-year-old man was admitted to our clinic with complaints of palpitation, intermittent fever, night sweats, lumbago, abdominal pain and loss of appetite for last one month. He had a history of rheumatic heart disease (RHD) in his childhood period. On physical examination, fever was 39.2°C and pulse rate was 100/min, he had hepato-splenomegaly and 2/6 systolic ejection murmur best heard at apex. On ECG, the rhythm was sinus. His blood chemistry on admission was within normal limits except for elevated C-reactive protein (4.5 mg/dl), leukocytes (12400/mm<sup>3</sup>) and erythrocyte sedimentation rate (90 mm/h). The patient was seropositive [immunoglobulin (Ig) M and Ig G] with Brucella agglutination titers of up to 1/160.

On the transthoracic echocardiography (TTE), a very mobile band-like echogenic structure was identified in the left ventricle. On TTE apical four-chamber view the structure originating from the ventricular endocardium below the papillary muscle and extending to the left ven-

tricular out-flow tract was observed (Fig. 1. Video 1, 2. See corresponding video/movie images at [www.anakarder.com](http://www.anakarder.com)). This structure resembled FT. A hyperechogenic vegetation-like mass, 0.9x0.9 cm in size, was attached to free end of this FT (Fig. 1, 2. Video 1, 2. See corresponding video/movie images at [www.anakarder.com](http://www.anakarder.com)). An isoechoic vegetation-like mass was attached to atrial side of the anterior (AML) and posterior mitral leaflet (PML) (0.4x0.4 and 0.3x0.3 cm in size, respectively). In addition, the original mitral valve's chordae tendineae were affected by endocarditis but were intact. These data were confirmed by transesophageal echocardiography (TEE) (Fig. 3. Video 3. See corresponding video/movie images at [www.anakarder.com](http://www.anakarder.com)).

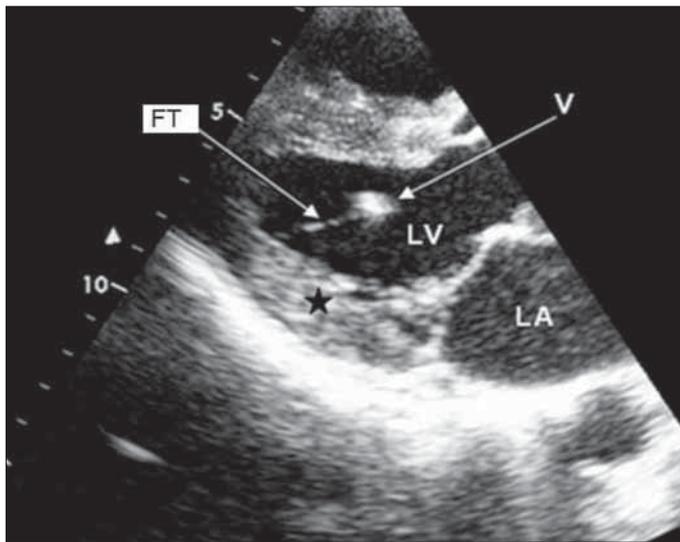
The patient improved clinically following the treatment and this improvement was evident on clinical examination and supported by serology and hemogram. However, control TTE revealed an increase in size of the vegetation on the mitral valve (AML; 0.6x0.6 cm, and PML; 0.5x0.5 cm, on the tenth day of hospitalization) and no change in size of the vegetation on the FT.

Urgent surgery was performed, due to embolic potential of the mobile vegetation on the ruptured FT, and increasing size of the vegetation on the AML and PML. Excision of the ruptured FT and mitral valve replacement were performed during operation. The antibiotic treatment was continued and postoperative period was uneventful. Pathologic examination of a mitral valve and band-like specimen confirmed vegetations and FT.

### Discussion

Endocarditis is a rare, but a serious manifestation of brucellosis. It occurs in 0.3-0.6% of patients (1). Nevertheless, endocarditis is responsible for the majority of deaths related to this illness (2). The infection predominantly involves the aortic valve (about 80% of cases). Other heart valves may also be affected, but usually this requires a triggering factor such as the RHD, congenital malformation and pacemaker lead (3).

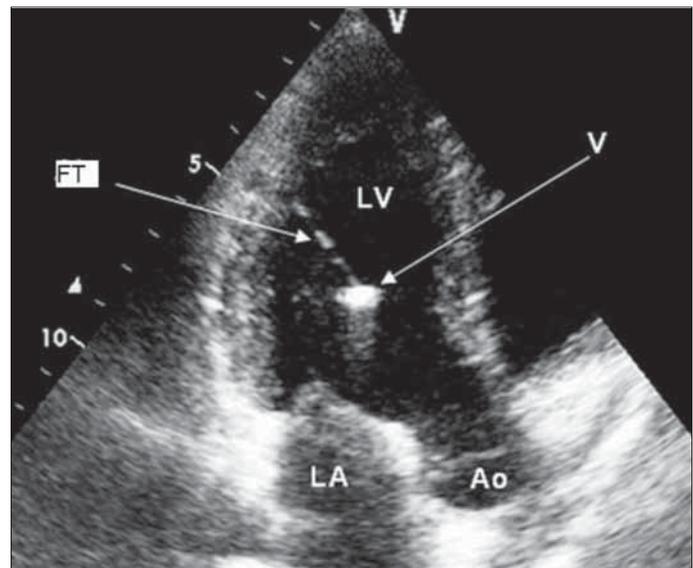
Left ventricular bands and false tendons are usually course from the midportion of the interventricular septum to the free wall (anterolateral) of the left ventricle. The incidence of FT varies between 5-26%



**Figure 1. Parasternal long-axis echocardiographic view of vegetation and left-ventricular false tendon originating from the below of papillary muscle**

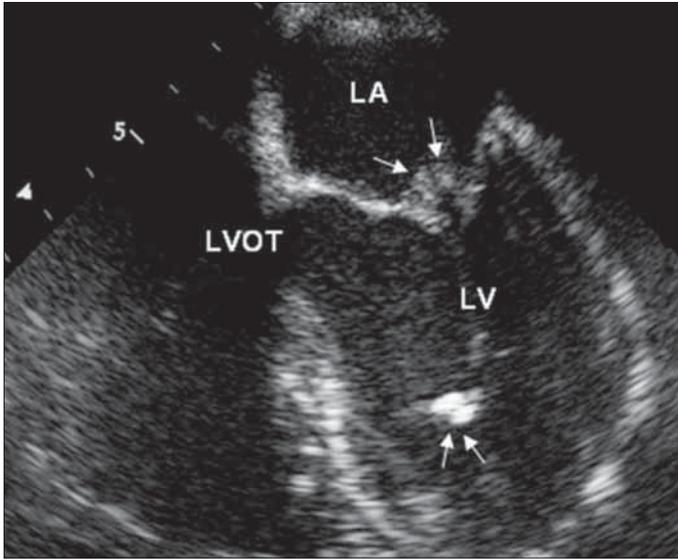
FT - false tendon, LA - left atrium, LV - left ventricle, V - vegetation

\* - papillary muscle



**Figure 2. Apical 3-chamber echocardiographic view of left-ventricular false tendon and vegetation**

Ao - aorta, FT - false tendon, LA - left atrium, LV - left ventricle, V - vegetation



**Figure 3. Transesophageal 4-chamber echocardiographic view of highly mobile structure, ruptured left-ventricular false tendon and vegetation, in left ventricle**

LA - left atrium, LV - left ventricle, LVOT - left ventricular outflow tract  
Arrows: vegetation

in several echocardiographic studies (4). The diagnosis FT is made by echocardiography. 2D-TTE are demonstrate the presence of FT and useful in differentiating FT from other structures. Several studies and case reports have shown association between FT and innocent musical murmur, palpitation and ventricular arrhythmia (5).

Our case may be interesting as it demonstrates big vegetation due to BE located on the free end of the ruptured FT and surgical therapy not delayed. In this patient, on TTE, the site of the FT in which attached septum was shown to be ruptured due to BE. The time of this condition could not be predicted, as it might have happened in any time. Why the patient did not have an embolic event due to this condition remains unclear.

## Conclusion

The rupture of the left ventricular false tendon due to endocarditis is very rare condition. Furthermore, life-threatening embolic event and ventricular arrhythmia may develop in this condition. On the other hand, the treatment of mobile vegetation due to BE should be urgent. The timing of surgery is very important for the success of the treatment and for the prevention of the complications (6).

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*This case report was partly presented at the 'Fifth Annual Congress on Update in Cardiology and Cardiovascular Surgery' in September 24-28, 2009, Antalya, Turkey*

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**Çevrimiçi Yayın Tarihi/Available Online Date:** 10.11.2010

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doi:10.5152/akd.2010.172