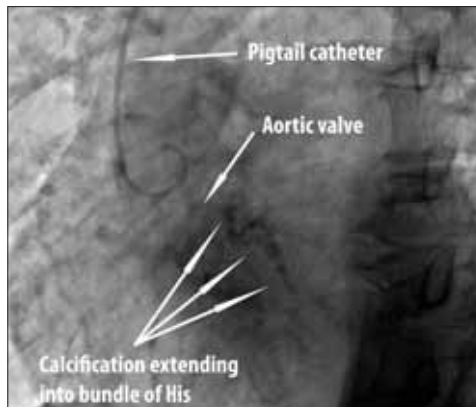


## Lev's disease: insidious enemy of conduction system

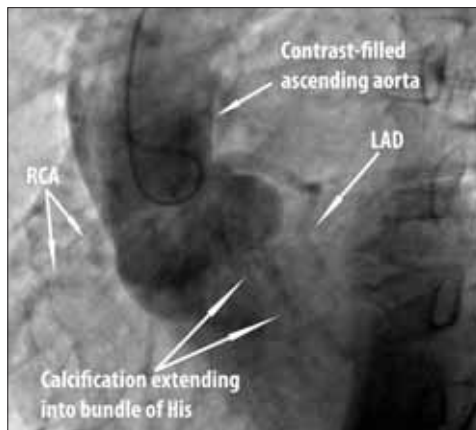
### *İleti sisteminin sinsi düşmanı: Lev hastalığı*

A 60-year-old previously hypertensive gentleman presented with progressive dyspnea. Electrocardiography showed atrial fibrillation with left bundle branch block. Cardiac catheterization revealed normal coronary arteries, severe aortic and mitral regurgitation. Despite mild calcification of aortic valve we noted a band-like calcification arising from aortic valve, extending into and outlining the bundle of His, and probably proximal part of the left bundle (Fig. 1, 2, Video 1. See corresponding video/movie images at [www.anakarder.com](http://www.anakarder.com)).

Lev's disease is often accompanied by aortic valve calcification that may invade the bundle of His, the right and/or left bundle branch. Progressive loss of myocytes lead to conduction defects including atrioventricular and bundle branch blocks.



**Figure 1.** Left anterior oblique projection aortography view of the mild calcification of the aortic valve and a band-like calcification extending into and outlining bundle of His



**Figure 2.** Aortography view of a mild calcification of the aortic valve and a band-like calcification extending into and outlining bundle of His, left anterior descending artery (LAD), right coronary artery (RCA) and aortic valve

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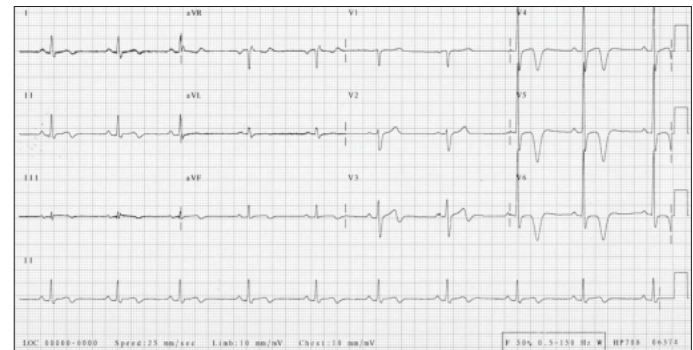
## A frequently overlooked etiology of negative precordial T wave: solitary papillary muscle hypertrophy

### *Prekordiyal negatif T dalgasının sıklıkla ihmal edilen bir nedeni: İzole papiller kas hipertrofisi*

Negative T wave on precordial leads is one of the most frequently encountered electrocardiographic (ECG) abnormality. Their significance depends on the electrocardiographic location, temporal evolution, and reversibility.

A 43-year-old male patient without any symptom presented with inverted T waves on ECG during a routine check-up. The ECGs showed persistent inverted T waves in lateral derivations (Fig. 1). On echocardiographic examination, left ventricular and right ventricular systolic and diastolic functions were within normal limits. Both ventricles were normal in thickness and had no wall motion abnormality. However, the posterior papillary muscle was thick in apical four-chamber view (Fig. 2). Its echogenicity has also been increased, compared to the septum and the adjacent lateral wall. The routine biochemistry, whole blood test, coronary angiography and myocardial perfusion scintigraphy were normal.

The T wave is the most variable part of the ECG. Its morphology is influenced by body position, respiration, hyperventilation, drugs, and myocardial ischemia or necrosis. Papillary muscle hypertrophy has been considered as a new echo-electrocardiographic syndrome. After review of the literature, the patient was diagnosed as solitary papillary



**Figure 1.** The electrocardiogram revealing negative, tented T-waves in leads V4-6. Extremity derivations mostly reveal biphasic or flat (aVL) T waves