

# Importance of Multislice Cardiac Computed Tomography For The Diagnosis and Evaluation of Silent Ischemia and Myocardial Infarction: Two Cases.

*Sessiz İskemi ve Miyokart İnfarktüsü Tanısı ve Değerlendirmesinde Multislice Kardiyak Kompute Tomografinin Önemi*

Faruk Erzen, Mustafa Özcan, Erhan Teker, Kıvanç Yalın, Güneş Hüseyinova, Derya Baykız, Kamil Adalet

Istanbul University, Faculty of Medicine, Department of Cardiology, Çapa, Istanbul, TURKEY.

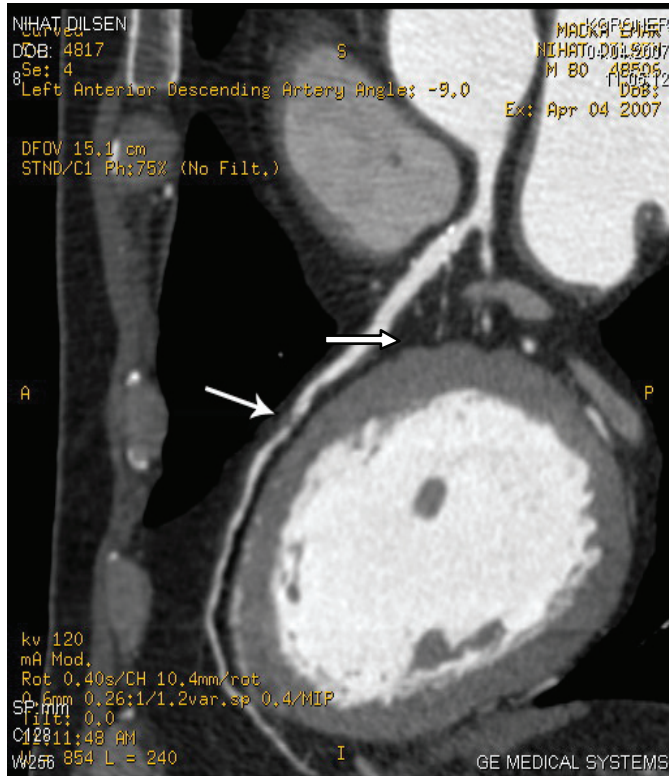
Corresponding author

Prof. Dr. Faruk Erzen  
I.U. Istanbul Medical Faculty Çapa, Istanbul, TURKEY  
Gsm : +90 532 453 51 79  
E-mail Address : farukerzen@gmail.com.

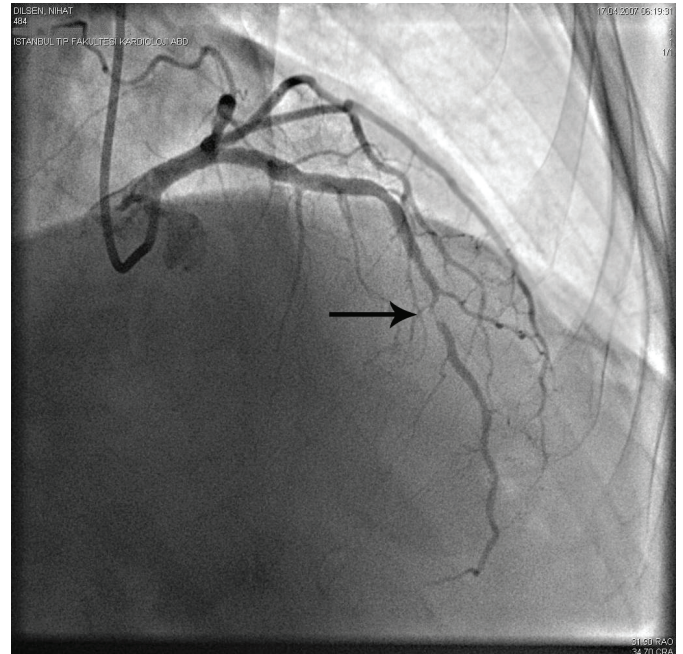
**Key Words :** *Computed Tomography, Coronary Vessels*

Currently, Multislice Computed Tomography (MSCT) is a very useful and an important tool for the noninvasive evaluation and during the intervention of coronary arterial pathology(1-13). We present the assessment of coronary artery disease in a 82-year-old male and another 57-year old male using a MSCT coronary angiography with 64-slice technology which was first described by Leschka S et al (5). First patient was admitted to the Cardiology Department with exercise dyspnea, and palpitation from time to time for about one month. ECG and Exercise ECG (Maximal effort test) were normal. The patient who was a medical doctor denied directly conventional coronary angiography and 64-slice multi-detector CT technique was performed (Fig.1). Coronary artery plaque leading to severe coronary artery stenosis

(%95) at the middle segment of LAD was detected and served as a guide for doing coronary angiography and for determining type and size of the stent. Single coronary lesion (LAD) was detected by coronary angiography (Fig.2) and the result was completely parallel to MSCT. Percutaneous coronary intervention was performed for LAD lesion and a drug-eluting stent was implanted after predilatation. The patient was examined routinely every three months. He was asymptomatic at the end of the three years after the procedure.



**Figure 1:** The adventitial atherosclerotic plaques with minimal calcifications (thick arrow) on the proximal segment of LAD artery without stenosis and a vulnerable soft plaque (thin arrow) on the mid LAD artery with significant stenosis.



**Figure 2:** Significant stenosis in the LAD of Case 1 with coronary angiography.

Second patient was admitted with trivial sore throat together with minimal diaphoresis and was admitted to the Cardiology Department with elevated of cardiac enzymes. His ECG (Fig.3) showed slightly prominent and non significant T waves on V2-3. In the noninvasive technique (MSCT-Fig.4), completely total occlusion in the proximal segment in the left circumflex artery and critical stenosis(%98) at the middle segment of LAD were detected and invasive coronary angiography was done and the result was completely parallel to MSCT (Fig.5). This patient had a subacute silent posterior myocar-



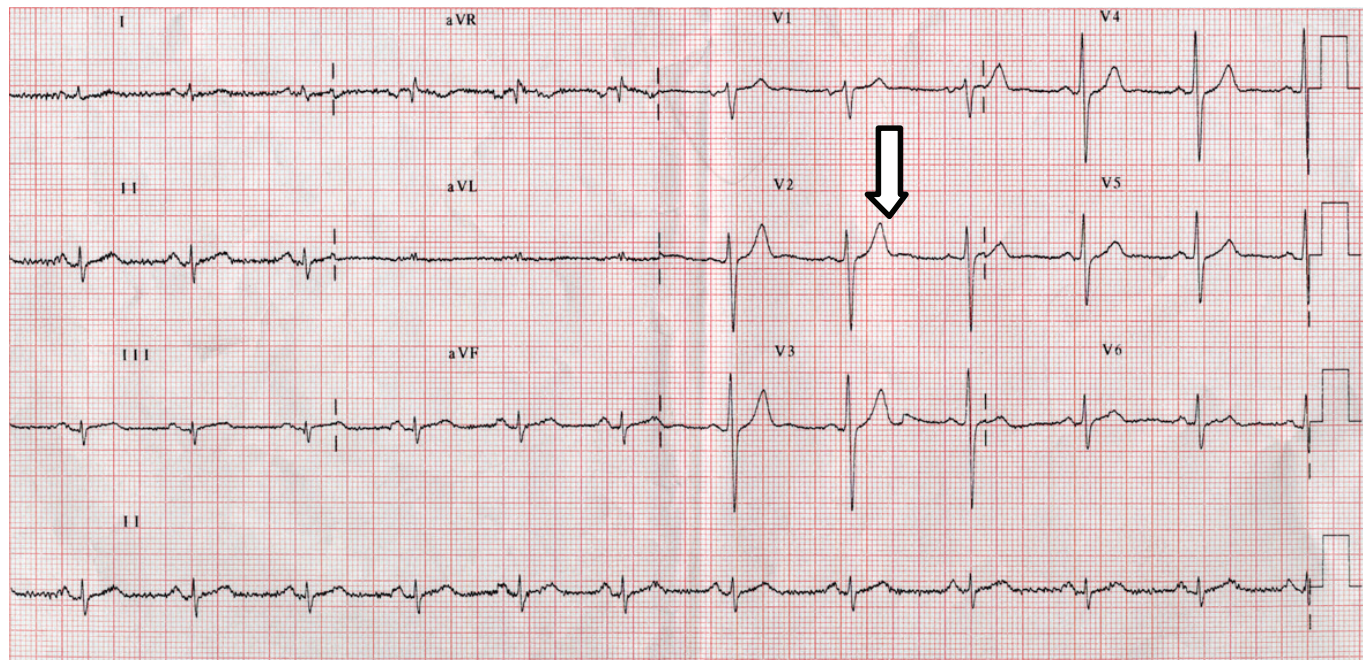


Figure 3: Normal ECG of Case 2.

dial infarction. Percutaneous coronary intervention and predilatation was performed firstly for the total occluded circumflex artery and was opened successfully, and then to the critical lesion of LAD. Drug-eluting stents were implanted in these two lesions. The patient was examined routinely in every three months. This patient was also asymptomatic at the end of the two

years and four months after the procedure.

In conclusion the 64-slice multi-detector cardiac computed tomography is a very important device for the diagnosis, evaluation and the guidance for the treatment of silent ischemia and myocardial infarction.

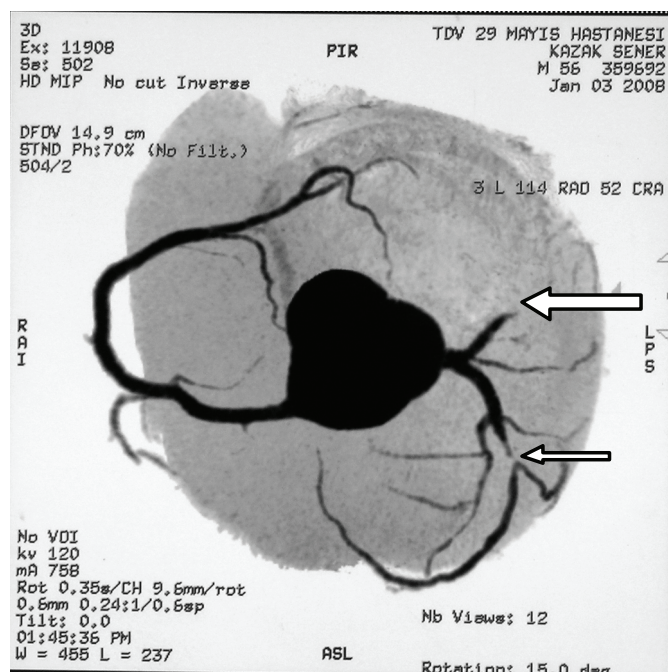


Figure 4: MSCT of Case 2. Cx totally occluded (thick arrow), a significant stenosis of LAD (thin arrow).

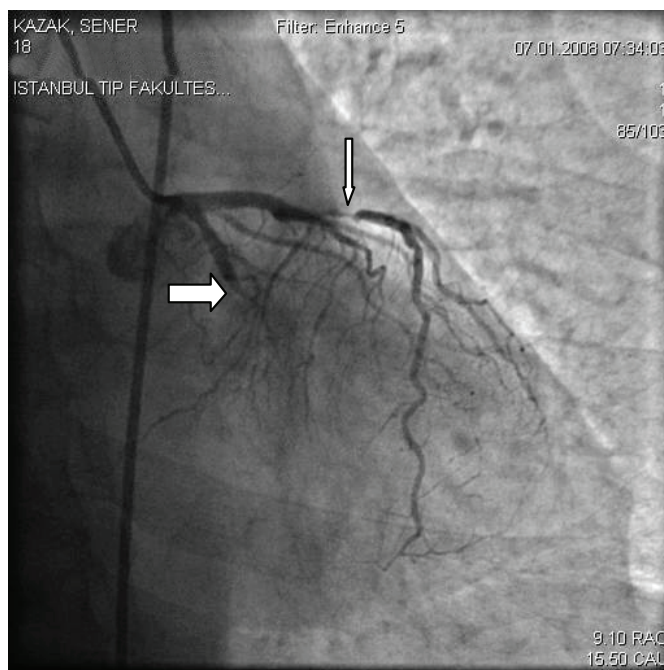


Figure 5: Total occlusion of Cx artery (thick arrow), significant stenosis of LAD artery (thin arrow) with standart coronary angiography of Case 2.

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