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OLGU SUNUMU / CASE REPORT

An Interesting Acute Myocardial Infarction Case; Simultaneous Anterior, Inferior, Posterior And Right Ventricular St-Segment Elevation Due To Left Anterior Descending Coronary Artery Occlusion

Elektrokardiyografide Eş zamanlı Anteriyor, İnferiyor, Posteriyor ve Sağ Ventriküler ST Yükselmesi Görülen Sol İnen Arter Tam Tıkanması; Sıra Dışı Bir Akut Miyokard İnfarktüsü Olgusu

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ABSTRACT
A 54-year-old female patient presented to our Emergency Department with chest pain for 1 hour. She has only a history of smoking. There was no other systemic disease history. ECG showed ST elevation over lead V1–V6, v4R, v5R, v6R, lead II, III, aVF and posterior leads. Emergent percutaneous coronary intervention was done. Coronary angiography showed total occlusion in LAD just below second diagonal branch. Balloon predilatation and bare metal stent implantation were performed after 45 minutes of admission. After PCI, ST-segment elevations in all leads resolved and chest pain relieved immediately. CAG showed LAD was a long vessel that extended to the inferoapical wall. This rarely condition was named “wrapped LAD”. Circumflex artery and right coronary artery were absolutely normal.
Key Words: Acute coronary syndrome, wrapped left anterior descending artery

ÖZET
Ellidört yaşında bayan hasta acil servise 1 saatlik göğüs ağrısı ile başvurdu. Risk faktörü olarak sadece sigara vardı. Sistemik başka bir hastalık öyküsü yoktu. Çekilen EKG’de V1-V6, V4R,V5R,V6R, D2,D3,AVF ve posteriyor derivasyonlarda ST yükselmesi saptandı. Acil koroner anjiografi uygulandı. Koroner anjiyografi sonucunda sol inen arter 1. diagonal sonrasında total tıkanıklık saptandı. Lezyon balonla pre dilatasyon edildi. Daha sonra lezyona başvurudan 45 dakika sonra çıplak metal stent takıldı. Lezyon tam açıldı. Perkutan koroner girişim sonrası ST yükselmesi geriledi. Göğüs ağrısı geçti. Koroner anjiografi sonucu sol inen arterin inferoapikal duvara uzandığı görüldü. Çok nadir rastlanan bu durum “wrapped LAD” olarak isimlendirilmektedir. Sirkumfleks arter ve sağ koroner arter normal saptandı.
Anahtar kelimeler: Akut koroner sendrom, wrapped sol inen arter

INTRODUCTION
Simultaneous anterior and inferior ST-segment elevations in acute myocardial infarction are rarely condition. This makes it difficult for physicians to evaluate which vessel is the true infarct-related artery without angiography. Herein, we report a case that ST- segment elevations were detected in all derivations.

CASE REPORT
A 54-year-old female patient presented to our Emergency Department with chest pain for 1 hour. She has only a history of smoking. Electrocardiography (ECG) showed ST elevation over lead V1–V6, v4R, v5R, v6R, lead II, III, aVF and posterior leads (Figure 1, 2). Primary percutaneous coronary intervention (PCI) was done. Coronary angiography (CAG) showed total occlusion in left anterior descending (LAD) artery just below second diagonal branch. After primary PCI, ST-segment elevations in all leads resolved and chest pain relieved immediately. Coronary anjiography showed LAD was a long vessel that extended to the inferoapical wall (Wrapped LAD) (Figure 5, 6). Circumflex artery and right coronary artery were absolutely normal. The patient was discharged three days after PCI with stabilization of his clinical status. The patient was asymptomatic for a month.

DISCUSSION
Simultaneous anterior, inferior, posterior and right ventricular ST-segment elevations in acute MI is rarely condition. This makes it difficult for physicians to evaluate which vessel is the true infarct-related artery without angiography. According to the previous literature, despite

Figure-1: Electrocardiography showed ischemic ST segment elevation in inferior leads with reciprocal changes.

Figure-2: Electrocardiography showed ischemic ST segment elevation in anterior leads.

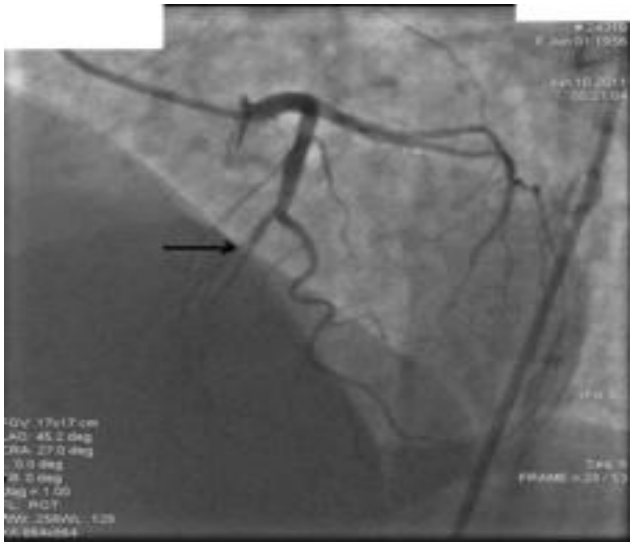

Figure-3: Coronary angiogram showed subtotal occlusion in the mid segment of the left anterior descending coronary artery

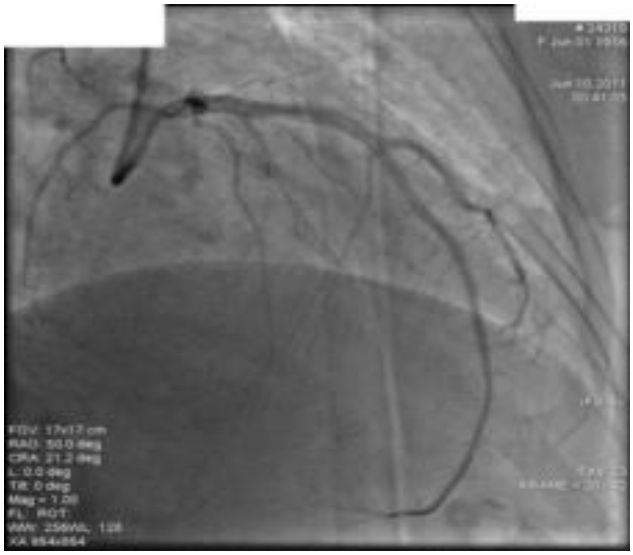

Figure-4: Post-procedural coronary angiography after stenting.

simultaneous anterior and inferior ST elevation, patients with this ECG finding often prove to have a relatively distal LAD lesion with limited infarction size (1). There is a special term "Wrapped LAD," which is defined as an LAD from a post reperfusion coronary angiogram that perfuses at least one-fourth of the inferior wall of the left ventricle in the right anterior oblique projection (2). Yip et al. (3) analyzed 37 patients with simultaneous ST-segment elevation in the precordial and inferior leads. They found that, in patients with a wrapped LAD occlusion, the mean sum of inferior ST-segment elevations was 3 mm and that these patients usually had single-vessel disease and a favorable clinical outcome. However, in patients with a non wrapped LAD occlusion, the mean sum of inferior ST-segment elevations was 11 mm and these patients often had more serious clinical presentations and unfavorable clinical outcomes (3). In our case, the occlusion was below the first diagonal branch of the wrapped LAD, and there were anterior, inferior, posterior and right ventricular ST-segment elevations. After emergency PCI ST-segment elevations in all leads resolved and chest pain relieved immediately.

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