Anadolu Kardiyol Derg
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depression in addition to chest pain at peak stress (Fig. 2) Therefore, we doubted about myocardial ischemia and planned scintigraphic imaging. Tc-99m-MIBI (methoxyisobutylisonitrile) myocardial perfusion scintigraphy was performed. When his stress and rest images were evaluated together, we found ischemia in apical, anteroseptal, septal and inferoseptal walls (Fig. 3). On coronary angiography, 60% proximal stenosis in first diagonal branch of left anterior descending artery, 70% stenosis after first diagonal branch and 100% stenosis after second diagonal branch in left anterior descending artery and 50-60% stenosis in posterolateral branch of right coronary artery were detected. These results were in correlation with ischemic regions in myocardial perfusion scintigraphy. The patient underwent a successful coronary artery bypass surgery.

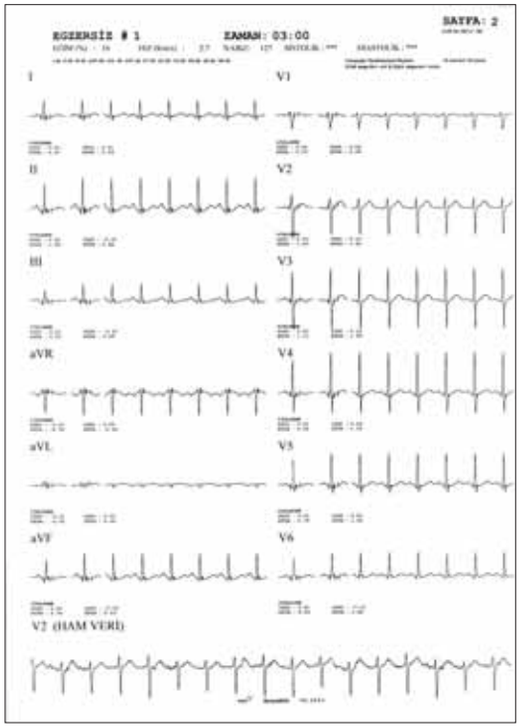

Figure 2. T wave normalization in the same derivations during exercise test

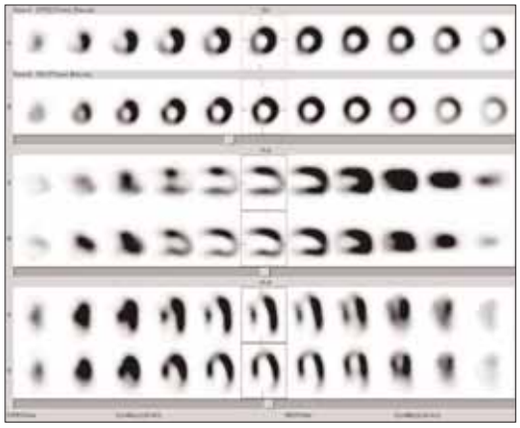

Figure 3. Multiple perfusion abnormalities of the same patient in the myocardial perfusion SPECT imaging

T wave normalization during stress testing was shown to be associated with low sensitivity and poor positive predictive value for stress-induced reversible myocardial ischemia. Therefore, further investigation may be beneficial to detect myocardial ischemia in patients with T wave normalization.

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The conus artery injection in LAD occlusion

LAD tıkanmasında konus arteri enjeksiyonu

The conus artery (CA), the first branch of the right coronary artery (RCA) courses in anterior aspect of the heart and terminates near the anterior interventricular groove, which also contains the left anterior descending artery (LAD). It is a major collateral source in LAD occlusions. In about %50 of human hearts the CA arises from a discrete ostium near the RCA ostium. A 57 years old man with a history of WPW syndrome and non-insulin-dependent diabetes presented with 3 hours lasting typical chest pain. Physical examination revealed normal findings. electrocardiogram showed sinus rhythm, delta waves with a QRS duration of 0.14 msec and negative T waves in leads V1-6 , DI, and aVL (Fig. 1). Cardiac markers were elevated and he was transferred to coronary care unit with a diagnosis of non-ST-elevation myocardial infarction. Echocardiography showed hypokinesis of anterior and apical walls with an ejection fraction of 45%. Standard coronary angiography revealed a totally obstructed LAD at ostium (Fig. 2) and a dominant RCA with 90% and 80% stenosis in proximal and mid segments respectively (Fig.3). No antegrade or collateral filling to distal LAD was observed during left and right coronary injections but as the LAD area was considered to be viable (anterior hypokinesis in

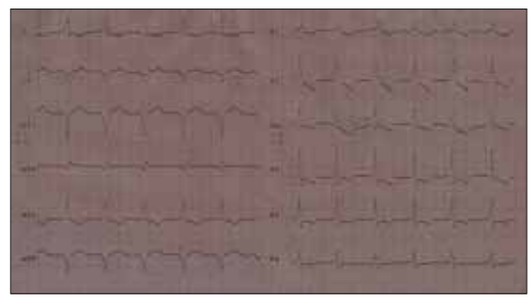

Figure 1. Electrocardiogram on admission

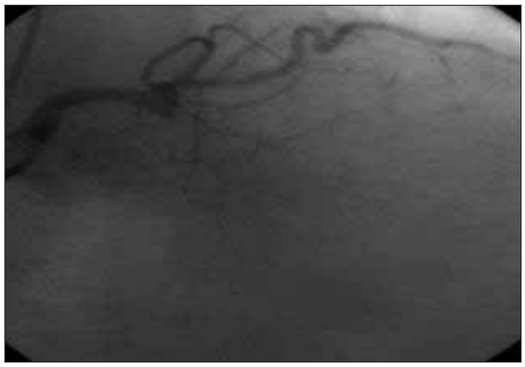

Figure 2. Left anterior descending artery ostial occlusion (LAO-0, Cranial 40 degrees)
LAO-left anterior oblique view

Figure 3. Right coronary artery injection (LAO 0, Cranial 30 degrees)
LAO-left anterior oblique view

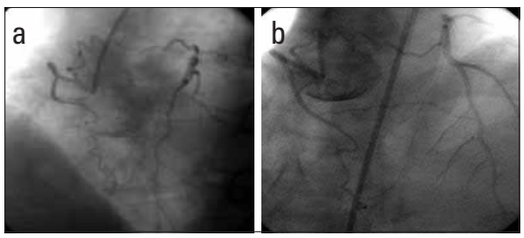

Figure 4A. Opacification of Left anterior descending artery through selective conus artery injection (LAO 40, Cranial 20 degrees) B. Selective conus artery injection (LAO 0, Cranial 30 degrees)
LAO-left anterior oblique view

echocardiography and ventriculography) a selective CA injection was performed through which a large LAD lumen could be visualized (Fig. 4). The patient was referred for coronary artery bypass surgery with two-vessel disease including ostial LAD occlusion. In this case, the indicators of viability in LAD region led us to search other collateral pathways which can not be detected by standard angiographic views. After detecting the separate ostium of the CA, a selective CA injection was made through a side holed 6F Judkins right guiding catheter, which was preferred to avoid total occlusion of the small diameter CA. In practice, with acceptance of a very short pressure damping time and with no test injection; quick withdrawal of the catheter after injection may be safe for selective imaging of the CA. And if selective engaging to the ostium of the CA is not possible a multislice computerized tomography may be an appropriate alternative diagnostic tool. As the quality of distal lumen (diameter, length and absence of distal stenoses) in totally occluded arteries, especially when LAD is concerned is critical in planning surgery every effort is warranted to adequately document it.

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Catheter-induced multiple spasms in the right coronary artery

Sağ koroner arterde kateterin indüklediği çoklu spazm

A 52-year-old male, with multiple risk factors for coronary artery disease was referred to the cardiology clinic. Non-invasive tests suggested myocardial ischemia and the patient underwent a coronary angiography. He had plaques on both the left anterior descending and the circumflex coronary arteries. The right coronary artery had significant stenosis in three locations (Video 1. See corresponding video/movie images at www.anakarder.com). Sixty seconds after intracoronary administration of 100 µcg nitroglycerine the stenoses completely resolved (Fig. 1, Video 2. video/movie images at www.anakarder.com). The patient appeared to have catheter-induced multiple coronary artery spasms (CAS) and remained symptom free with medical treatment.

Catheter-induced CAS is usually recognized by a smooth concentric narrowing less than 2 mm long in the right coronary artery next to the tip of the catheter. The catheter type, excessive manipulation, the lack of o perator experience and the patient's sensitivity can precipitate the

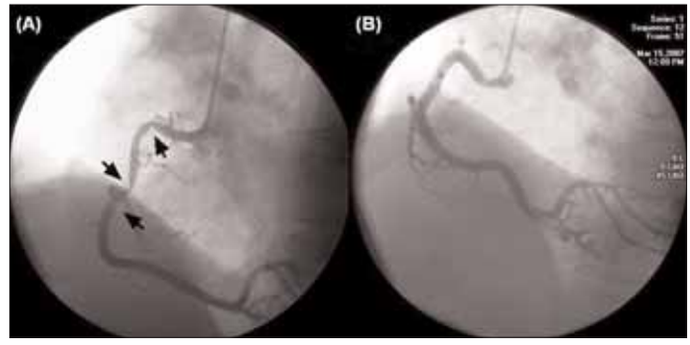

Figure 1. a) The right coronary artery with catheter-induced CAS in three segments (mimicking critical coronary stenosis)
b) Complete resolution of CAS following intracoronary administration of 100 µcg nitroglycerine
CAS-coronary artery spasm