***Case Report* / Olgu Sunumu**

A Patient With Unstable Angina and Without Abnormal Electrocardiographic Findings and Total Occlusion of the Left Anterior Descending Coronary Artery

Sol Ön İnen Koroner Arteri Tam Tıkalı, Anormal Elektrokardiyografi Bulguları Olmayan Anstabil Anginalı Bir Hasta

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Submitted / Başvuru tarihi: *24.07.2008* ***Accepted / Kabul tarihi:*** *03.09.2008*

Coronary collaterals can be visualized on coronary angiography and they potentially offer an important alternative source of blood supply when the original vessel fails to provide sufficient blood. We report a patient with unstable angina and normal electrocardiography and total occlusion of the left anterior descending coronary artery.

Key words: Acute coronary syndrome; total occlusion; coronary collateral circulation; normal electrocardiography.

Koroner kollateraller koroner anjiyografide görülebilir ve yeterli kan akımını sağlamak için damar yetersiz kaldığında önemli bir alternatif kaynak olarak görev alırlar. Biz sol ön inen koroner arteri tam tıkanmış, anstabil anginalı ve normal elektrokardiyografi bulgularına sahip bir hasta rapor ediyoruz.

Anahtar sözcükler: Akut koroner sendrom; tam tıkanıklık; koroner kollateral dolaşım; normal elektrokardiyografi.

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CASE REPORT

A 52-year-old male without previous myocardial infarction and with a history of hypertension presented to our clinic with unstable angina pectoris. Electrocardiography was normal (Fig. 1). Echocardiography revealed trivial mitral regurgitation and concentric left ventricular hypertrophy with preserved left ventricular systolic function. There was no regional wall motion abnormality. Coronary angiography revealed total occlusion at proximal of the left anterior descending coronary artery and a large right-dominant coronary artery that filled the entire left coronary circulation via collaterals. In addition, critical occlusion at the right coronary artery was seen (Figs. 2 and 3).

DISCUSSION

Coronary collaterals, or "natural bypasses," are anastomotic connections without an intervening capillary bed between portions of the same coronary artery and between different coronary arteries.[1] They can be visualized on coronary angiography and they potentially

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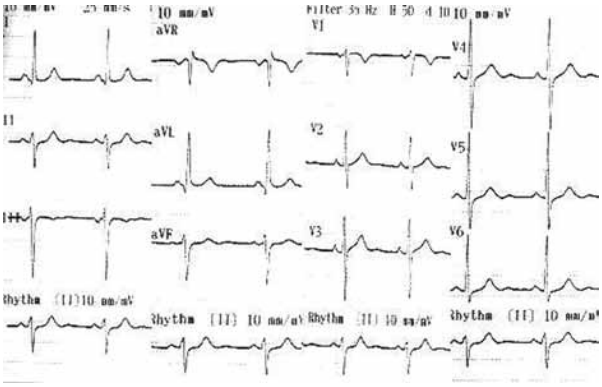

Fig. 1. *Electrocardiography showing left axis and QRS rate:76/min.*

offer an important alternative source of blood supply when the original vessel fails to provide sufficient blood.[2] Coronary collaterals may limit infarct size, preserve viability, and prevent ventricular aneurysm formation during an episode of acute coronary occlusion. In patients with stable coronary artery disease, a decrease in ischemic events and a better prognosis have been reported when collaterals are present.[3] Although some authors have suggested that unstable angina may be related to a lack of intracoronary collaterals, others have found no difference in the frequency of collaterals in patients with chronic stable angina compared to those with unstable rest pain.[4,5] There is also controversy as to whether the presence of collaterals preserves wall motion or prevents myocardial infarction in patients with severe obstructive disease. Several investigators have suggested that collaterals are more frequently observed in the presence of abnormal regional ventricular contraction.[5,6] Others have demonstrated that pathologic Q-waves on the electrocardiography diagnostic of transmural myocardial infarctions frequently occur despite the presence of collateral vessels in patients with chronic coronary disease.[7]

Neither abnormal regional ventricular contraction on echocardiography nor Q waves on the electrocardiography were seen in our patient. We thought that the patient's angina was related with occlusion at the right coronary artery. We speculated that occlusion at the right coronary artery led to ischemia either by decreasing intracoronary collateral pressure or directly.

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Fig. 2. *Coronary angiography showing eccentric noncritical occlusion at left main coronary artery and total occlusion at proximal segment of the left descending coronary artery.*

Fig. 3. *Coronary angiography showing a large right-dominant coronary artery that filled the entire left coronary circulation via collaterals and critical occlusion at the right coronary artery.*

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