

A case of myocardial bridging of the left circumflex coronary artery

Sol sirkumfleks koroner arterde miyokardiyal köprüleşme: Olgu sunumu

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Myocardial bridge is a cluster of myocardial fibers crossing over the epicardial coronary arteries at a distance. It is most frequently seen on the left anterior descending artery. Involvement of the left circumflex coronary artery is very rare. A 63-year-old man presented with chest pain radiating to the left shoulder. Physical examination was normal. The electrocardiogram showed slight lateral ST-segment changes. Treadmill electrocardiography revealed significant lateral ST and T wave changes. Coronary angiography showed normal coronary arteries except for significant systolic narrowing of the mid-circumflex artery after the first obtuse marginal branch. The patient was discharged with beta-blocker therapy. He had no recurrent chest pain during eight months of follow-up.

Key words: Coronary angiography; coronary vessel anomalies/diagnosis/therapy.

Myocardial bridge is a cluster of myocardial fibers crossing over the epicardial coronary arteries at a distance. Myocardial bridging most frequently occurs on the left anterior descending artery (LAD) and may lead to ischemia and related complications. Involvement of the left circumflex artery is very rare. Herein, we present a symptomatic case of circumflex coronary artery bridging.

CASE REPORT

A 63-year-old man presented to our clinic because of chest pain radiating to the left shoulder. Physical examination was normal. Blood pressure and cardiac rate were in normal ranges. The electrocardiogram showed slight lateral ST-segment changes. Echocardiography was normal. Treadmill electrocardiography revealed significant lateral ST and T wave changes. Cardiac catheterization showed normal coronary arteries except for significant systolic nar-

Miyokardiyal köprüleşme epikardiyal koroner arterlerin belirli mesafelerde üzerinden geçen kas lifi demetlerinden oluşur. En sık olarak sol ön inen arter üzerinde görülür. Sol sirkumfleks arterde görülmesi çok nadirdir. Altmış üç yaşında erkek hasta sol omza yayılan göğüs ağrısı yakınmasıyla başvurdu. Fizik muayenesi normal olan hastanın elektrokardiyogramında lateral ST-segment değişiklikleri izlendi. Egzersiz elektrokardiyogramda belirgin lateral ST ve T dalga değişiklikleri gözlemlendi. Koroner anjiyografide, birinci obtus marjinden sonra sirkumfleks arterin ortasında sistolik daralma dışında koroner arterler normal bulundu. Hasta beta-bloker tedavisi ile taburcu edildi. Sekiz aylık takip döneminde göğüs ağrısı tekrarlamadı.

Anahtar sözcükler: Koroner anjiyografi; koroner damar anomalisi/tanı/tedavi.

rowing of the mid-circumflex artery after the first obtuse marginal branch (Fig. 1). Symptomatic relief was achieved after beta-blocker therapy. He was followed-up uneventfully for eight months.

DISCUSSION

Myocardial bridging is characterized by systolic compression of the tunneled segment, which remains clinically silent in the vast majority of cases.^[1] The bridging appears on angiography as systolic narrowing or complete obliteration of the arterial lumen, while the lumen is normal during diastole. Its prevalence shows substantial variation, being higher at autopsy than angiography. Compared to angiographic depiction of less than 5%, myocardial bridges are thought to exist in about one-third of adults.^[1] In the vast majority of cases, angiographic localization of myocardial bridges is the LAD.^[2] Localizations other than the LAD are extremely rare.^[3-6]

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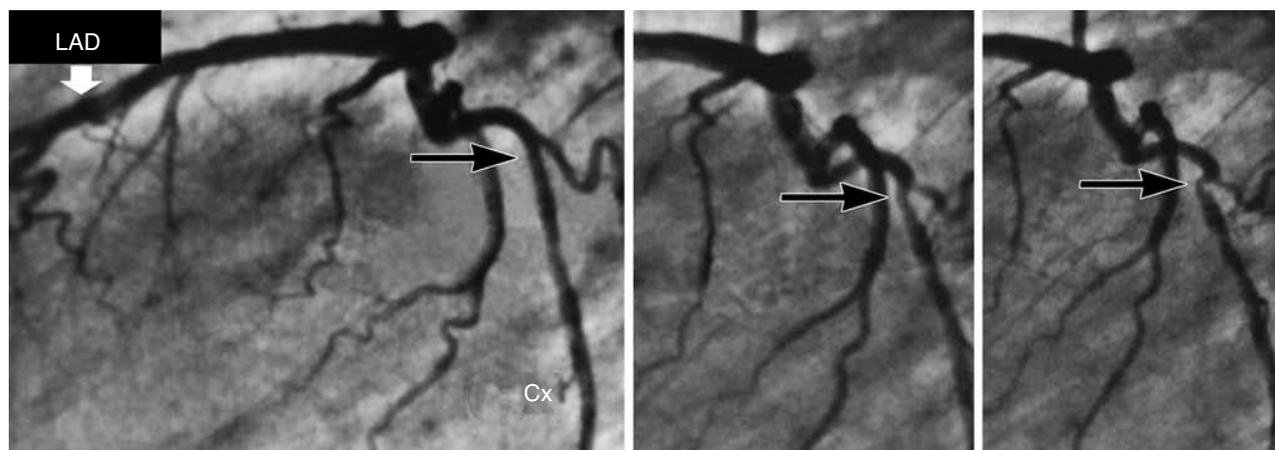


Figure 1. Successive frames from the left lateral view showing significant systolic narrowing of the mid-circumflex (Cx) artery after the first obtuse marginal branch. LAD: Left anterior descending artery.

Arjomand et al.^[5] reported the first case of myocardial bridging of the circumflex artery (mid-portion) associated with acute myocardial infarction. Ischemia due to myocardial bridging of a coronary artery may occur by several mechanisms, including systolic compression of the tunneled segment, increased sympathetic drive during stress or exercise, endothelial dysfunction, coronary artery spasm, and systolic kinking of the artery.^[7-10] Clinically, myocardial bridges may present as atypical or angina-like chest pain with no consistent association between symptom severity and the length or depth of the tunneled segment or the degree of systolic compression.^[11] The risk for serious clinical consequences is low if associated symptoms and ischemia are timely and appropriately treated. No treatment may be required in asymptomatic patients. The approach to patients having myocardial bridges in the LAD may be extrapolated to those with non-LAD myocardial bridges. There are three potential therapeutic strategies including pharmacological treatment, surgery (myotomy or bypass grafting), and percutaneous coronary intervention.

In conclusion, although myocardial bridges most commonly involve the LAD, non-LAD myocardial bridges should be borne in mind in symptomatic patients. In our case, the symptoms were completely relieved with beta-blocker therapy.

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