Huge Spontaneous Coronary Artery Dissection In A Diabetic Woman: A Case Report and Review of the Literature

DİYABETİK BİR KADIN HASTADA SPONTAN KORONER ARTER DİSSEKSİYONU: OLGU SUNUMU VE LİTERATÜRÜN GÖZDEN GEÇİRİLMESİ

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Abstract

Coronary artery dissections can be primary or secondary; the primary dissections occur spontaneously but the secondary dissections occur as an extension from aortic root dissection or following an insult as a consequence of coronary angiography, coronary intervention, cardiac surgery or chest or cardiac trauma. Spontaneous coronary artery dissection is rare but it causes myocardial ischemia and ischemic coronary events. Clinical presentation depends on the extend of coronary dissection, the rate of development and the vessels involved.We report a diabetic women who suffered anginal pain due to spontaneous coronary artery dissection of left anterior decending coronary artery, (LAD).

Key Words: Dissection; diabetes mellitus

Özet

Koroner arter disseksiyonları primer ya da sekonder olabilir; primer disseksiyonlar spontan olurken sekonder disseksiyonlar; aort kökünden bir uzanım ile ya da koroner anjiyografi, koroner girişim, kalp cerrahisi, veya gögüs, kalp travması sonucu oluşur. Spontan koroner arter disseksiyonları nadirdir fakat miyokard iskemisi ve iskemik koroner olaylara neden olur. Klinik görünüm koroner disseksiyonun, gelişim hızına, tutulan damarların yaygınlığına ve yerine bağlıdır. Sol ön inen koroner arterin (LAD) spontan disseksiyonuna bağlı gögüs ağrısından yakınan bir diyabetik bayan bildirdik.

Anahtar Kelimeler: Disseksiyon; diyabet

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Spontaneous coronary artery dissection (SCAD) is rare but it causes myocardial ischemia and ischemic coronary events. Clinical presentation depends on the extend of coronary dissection, the rate of development and the vessels involved. We report a diabetic women who suffered anginal pain due to spontaneous coronary artery dissection of left anterior decending coronary artery (LAD).

Case Report

A 56 years old women was addmitted for chest pain. During last year, she had chest pain with exercise and sometimes at rest. During exercise, she had dyspnea and pressing chest pain. In ECG, the ritm was sinus and there was poor R progression in precordial leads V1-3. The pulse rate was 64 beats/min. Arterial blood pressure was 120/60 mmHg. The examinations of her systems were normal. She had hypercholesterolemia and insulin dependent diabetes mellitus. Her echocardiographic examination showed normal left ventricular systolic function and grade 1 diastolic dysfunction. In coronary angiography, left main coronary artery was normal. There was huge dissection in the left anterior decending coronary artery until the third diagonal branch, (Figure 1). The circumflex and right coronary arteries (RCA) were normal.

We decided medical therapy for the patient. As medical therapy, insulin (24/12U)/day, silazapril 5 mg/day and hydrocholorotiazide 12.5

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Figure 1. The left coronary arteriography in the 30-degree left anterior cranial position. Two arrows indicate the dissection part of LAD.

mg/day combination, metaprolol 25 mg/day, enteric-coated aspirine 100 mg/day and atorvastatin 40 mg/day were planned for the patient.

Discussion

Coronary artery dissections can be primary or secondary; the primary dissections occur spontaneously but the secondary dissections occur as an extension from aortic root dissection or following an insult as a consequence of coronary angiography, coronary intervention, cardiac surgery or chest or cardiac trauma.[1] Spontaneous coronary artery dissection results in a hemorrhagic seperation of the media, with creation of false lumen, with or without an associated tear in the intima. The seperated media can force the intimal medial layer toward the true lumen of the coronary artery leading to distal myocardial ischemia, infarction or sudden death. The false lumen created by dissections may heal spontaneously without futher compromise to the true lumen, or may occlude the true lumen, especially if forms an expanding cul de sac.[1]

There are some charasteristic features of SCAD; a) 75% of all cases are women, b) pregnant women in the peripartum period make one-third of patient population, c) it is the disease of young people and mean age of onset in 35 years, d) clinical presentation is related to extend and arterial location of dissection, e) dissection can be seen in any coronary artery, f) LAD dissection is more in women while RCA involvement is more in man, g) in living cases, dissection of RCA is more common than LAD dissection.[2]

The clinical presentation of the primary spontaneous coronary artery dissection is different from that of coronary atherosclerosis, as the average age of presentation of the former is younger and coronary risk factors may be absent. In addition, chest pain in patients with spontaneous coronary artery dissection is often less severe and might be of longer duration.[3] The clinical spectrum reported of its presentation includes angina, myocardial infarction, heart failure, cardiogenic shock, cardiac tamponade and sudden death.[4-6] It had been reported that left ventricular aneurysm developed years after myocardial infarction due to spontaneous coronary artery dissection of the LAD.[6] The spontaneous coronary artery dissection should always be considered in the differential diagnosis in young persons sustaining acute precordial pain, especially the postpartum women.[6]

The sporadic nature of the primary spontaneous coronary artery dissection precludes formulation of any uniform recommendations and thus the treatment is usually tailored to the individual patient.[5] Medical therapy with standard medications and careful follow-up has been used most often in stable patients.[6-9] In addition, coronary artery bypass, coronary catheter based interventions including stent placement, thrombolysis and glycoprotein IIB/IIIA inhibitor therapy have all been used successful, although in the acute phase, the thrombolytic therapy may be dengerous.[3,9-13] While asymptomatic patients with non-occlusive dissection and good distal flow can be managed conservatively, the symptomatic patients should probably be treated by coronary intervention with stent placement or bypass surgery, if feasible.[13] In certain case the extension of dissection may limit the use of coronary catheter based interventions or

even surgery, and conservative medical management might be superior to stent placement in coronary dissections of the entire length with good flow. Therefore, patients suspected of having coronary dissection should undergo early angiography as it may indentify the patients who could benefit from stent placement or bypass surgery and those who could be treated by conservative medical management.[14] Moreover, an early recognition of the left main coronary artery dissection or three–vessel dissection is essential as an urgent coronary artery bypass grafting may be life saving in these cases.[15] In addition to conventional medical and surgical therapy, aggressive immunosuppressive therapy (prednisone and cytoxan) in case of multivessel dissection has been reported to result in spontaneous angiographic healing.[16] This approach seems feasible in cases of multiple surgically inoperable coronary dissections.[16]

The prognosis varies widely as the numbers of the reported patients are small. In a report on 42 cases of spontaneous coronary artery dissection occuring in peripartum women, the short term mortality was 49% and sudden cardiac death was the initial presentation in 28% of cases.[16] Conversely, there are reports where with conservative treatment spontaneous coronary artery dissection patients did well at 4 months and 10 years follow up.[8,17] In general, the long-term prognosis of the patients with spontaneous coronary artery dissection is considered favorable if they survive the acute phase.[10,12,17-19]

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