

Fusiform Left Anterior Descending Coronary Artery Aneurysm: Case Report

Fuziform Sol Ön İnen Koroner Arter Anevrizması

Alp ASLAN, MD,^a
Savaş AÇIKGÖZ, MD,^a
Mehmet ÖZKAN, MD,^a
Ümit ÖZYURDA, MD^a

^aCardiovascular Surgery Clinic,
Kavaklıdere Umut Hospital, Ankara

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Yazışma Adresi/Correspondence:
Alp ASLAN, MD
Kavaklıdere Umut Hospital,
Cardiovascular Surgery Clinic,
Ankara,
TÜRKİYE/TURKEY
alpslan@yahoo.com

ABSTRACT Coronary artery aneurysm is a rare condition of which treatment strategies are not standardized. A 68-year-old woman was admitted to our institution with a prolonged angina at rest. The coronary angiogram revealed a proximal stenosis and fusiform aneurysm of the left anterior descending (LAD) artery. Coronary bypass surgery was performed however no surgical intervention was applied to the coronary aneurysm. For prophylaxis from acute thrombosis, antiplatelet and anticoagulation treatment has been started to the patient. After one year follow up, no complications related to the aneurysm was observed.

Key Words: Coronary aneurysm; coronary artery bypass

ÖZET Koroner arter anevrizmaları, nadir rastlanan ve tedavi şekli standardize edilmemiş olgulardır. Hastanemize istirahat göğüs ağrısı nedeni ile başvuran 68 yaşındaki kadın hastanın yapılan anjiyografisinde proksimal stenoz ve fuziform sol ön inen (LAD) koroner arter anevrizması saptanmıştır. Hastaya koroner bypass operasyonu yapılmış ancak hastanın anevrizmasına müdahale edilmemiştir. Akut trombozdan korumak amacı ile antiplatelet ve antitrombotik tedavi başlanmıştır. Bir yıllık takibin sonunda anevrizmayla ilişkili komplikasyon olmadığı gözlenmiştir.

Anahtar Kelimeler: Koroner anevrizma; koroner bypass

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Coronary artery aneurysm is defined as a dilatation of coronary artery with a diameter of more than 1.5 times of the diameter of adjoining normal coronary artery.¹ Coronary aneurysm is usually asymptomatic and found incidentally by coronary angiography with an estimated incidence of 0.3% to 4.9%.¹ Its treatment strategies are not standardized due to its rarity.

CASE REPORT

A 68-year-old woman was admitted to our institution with a prolonged angina at rest. The coronary angiogram revealed a proximal stenosis of 90% and fusiform aneurysm (10 x 48 mm) of the LAD artery (Figure 1 and 2). Right and circumflex coronary arteries were normal. Coronary bypass surgery was suggested to the patient and an informed consent was obtained.



FIGURE 1: Fusiform LAD coronary artery aneurysm measuring 10 x 48 mm (left cranial view).



FIGURE 2: Proximal stenosis and fusiform LAD coronary artery aneurysm (right oblique cranial view).

The surgery was performed with median sternotomy. The left internal mammary artery (LIMA) was harvested as graft. LAD was grafted with the LIMA under cardiopulmonary bypass (CPB), mild hypothermia (32°C) and blood cardioplegic arrest. Cross-clamp and CPB time was 12 and 26 minutes respectively. No surgical intervention was applied to the coronary aneurysm. The surgery was uneventful. For postoperative thrombosis prophylaxis, antiplatelet and anticoagulation treatment has been started and the patient was discharged without any complication. The patient was followed up for one year without any cardiovascular events.

DISCUSSION

Coronary artery aneurysm is a rare condition nearly half of which originates from atherosclerotic lesions.² The main complication is myocardial infarction and aneurysm rupture rarely occurs. Because of the rarity of coronary artery aneurysm, it is difficult to standardize the treatment. Common treatment strategies during operation include pla-

cement of a graft to the coronary artery and subsequent exclusion of the aneurysm by proximal and distal ligation or resection and end-to-end anastomosis or grafting distal of the aneurysm to prevent embolization in the aneurysm with retrograde flow.³⁻⁶ However, most of the cases presented in the literature are aneurysms of right coronary artery, of which surgical exposure and approach is relatively easier. We present a fusiform coronary aneurysm and stenosis of proximal LAD where LAD-LIMA anastomosis was performed for the stenosis. We decided not to perform any intervention for the aneurysm due to aneurysm's mid-size long fusiform course and to preserve LAD's natural structure. Although anticoagulation therapy is the first choice for prophylaxis, in addition antiplatelet therapy has been used as well, as its benefits have previously been described in the literature.⁷

In proximal LAD stenosis with mid-size aneurysm, distal grafting to the lesion without any intervention to the aneurysm should also be considered beside other therapeutic options.

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