

## Case Report

Volume 7 Issue 3 – August 2017  
DOI: 10.19080/JOCCT.2017.07.555714

J Cardiol & Cardiovasc Ther

Copyright © All rights are reserved by Umit Yasar Sinan

# A Giant Coronary Artery Aneurysm Case Report: Treatment with Surgical Interventions



**Umit Yasar Sinan\***

*Institute of Cardiology, Istanbul University, Turkey*

**Submission:** August 24, 2017; **Published:** August 29, 2017

**\*Corresponding author:** Umit Yasar Sinan, Institute of Cardiology, Istanbul University, Keyci Hatun District, Haseki Adivar Street, Haseki/Fatih 34096, Turkey, Tel: +905333968403; Email: drumityasar@hotmail.com

## Introduction

Coronary Artery Aneurysm (CAA) is defined dilatation of a coronary artery exceeding more than 1.5 fold of the normal vessel diameter. If there is diffuse dilatation in coronary arteries that involves 50% or more of the length of the artery, it is named as coronary ectasia. In addition, the Committee of the American Heart Association has termed “giant aneurysm” if the aneurysm is greater than 8mm (or exceeding more than 4 fold of the normal vessel).

Even atherosclerosis is the most common etiology, Kawasaki Disease, inflammatory arterial disease [Polyarthritis Nodosa (PAN), Syphilis, Takayasu Arteritis and Behçet’s Disease], Connective Tissue Disease (CTD) and coronary artery revascularization procedures can be responsible for other cases. Treatment of a CAA is important because it may predispose ischemia, myocardial infarction, distal embolization due to thrombus formation within aneurysm, fistula formation and spontaneous rupture.

## Case Report

A 61-year-old female with typical chest pain and exertion dyspnea (NYHA II-III) was consulted to our outpatient clinic. The patient has hypertension, atrial fibrillation and chronic kidney disease in her medical history. Her medications include ACE-inhibitor, Warfarin, Spironolactone plus Thiazide combination and Metoprolol.

Echocardiography demonstrated good left ventricular systolic function, left atrial enlargement (5.4cm), moderate mitral regurgitation and moderate tricuspid regurgitation. Coronary angiography demonstrated diffuse ectasic coronary arteries and a focal stenosis of the mid segment of the LAD followed by a giant aneurysm. Also there is 60% stenosis in CxPL artery. We preferred coronary CT angiography to have exact measures of aneurism and measured it 11.5x12mm. The Myocardial Perfusion Imaging revealed ischemia on the anterior wall of the myocardium.

To be sure about the etiology we referred the patient to the department of the internal medicine. PAN, Syphilis, Takayasu Arteritis and Behçet’s Disease were specifically screened. The medical history was intensified about Kawasaki Disease. Blood samples were drawn for examination of CTD. After all of these researches we could not find any etiology except atherosclerosis.

Finally, we referred the patient to the department of cardiovascular surgery and they performed coronary artery bypass graft (LIMA-LAD,Ao-CxPL) + tricuspid anuloplasty + mitral ring anuloplasty operation because of the patient was symptomatic with critical LAD proximal stenosis that caused ischemia on the anterior wall of the myocardium and there was no reason other than atherosclerosis. We change her ACE inhibitor treatment with Losartan respect to the findings about its evidence-based preventive effect on aneurysms. We arranged her Warfarin dosages to provide INR levels within 2.5-3.5. Six months after surgery the patient has no recurrence of clinical symptoms.

Even coronary aneurysms are seen relatively more frequently, the giant aneurysms are still scarce. Because of its rarity the diagnosis and the treatment options are based on case reports and some reviews instead of controlled studies Furthermore, we don’t know the short or long term outcomes of any treatment options.

MDCT helps to analysis of the lumen and vessel wall to discriminate pseudo-aneurysms from the true aneurysms. However conventional coronary angiography can underestimate the exact size of aneurysm because it provides limited information about the vessel wall. Thus we used the both of these two methods in our case, complementary.

Several options such as medical management, surgical resection and covered stent implantation for treatment of CAAs are available. The appropriate treatment decision for CAAs presents a therapeutic challenge to the interventional cardiologist

and depends on the patient's clinical situation. The indications for the surgical approach include symptomatic patients with CAAs near bifurcation of large branches, evidence of emboli from aneurysm to the distal coronary bed resulting in myocardial ischemia, progressive enlargement of a CAA documented by serial angiographic measurements, CAAs in the left main stem and CAAs 3 times larger than the originated vessel diameter [1].

### Conclusion

By reporting this case we aimed to provide a help how to use the diagnostic tools for CAAs systematically and an option for treatment management with its short time follow-up results.



This work is licensed under Creative Commons Attribution 4.0 License  
DOI: [10.19080/JOCCT.2017.07.555714](https://doi.org/10.19080/JOCCT.2017.07.555714)

### References

1. Nichols L, Lagana S, Parwani A (2008) Coronary artery aneurysm: a review and hypothesis regarding etiology. Arch Pathol Lab Med 132(5): 823-828.

#### Your next submission with Juniper Publishers will reach you the below assets

- Quality Editorial service
- Swift Peer Review
- Reprints availability
- E-prints Service
- Manuscript Podcast for convenient understanding
- Global attainment for your research
- Manuscript accessibility in different formats  
( Pdf, E-pub, Full Text, Audio)
- Unceasing customer service

Track the below URL for one-step submission  
<https://juniperpublishers.com/online-submission.php>