

# Coronary artery bypass graft (CABG): A 13 year outcome in 65-year-old patient

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## Abstract

A 65-year-old patient with LAD ostial stenosis proved by coronary angiography is presented. LAD ostial stenosis is an uncommon condition whose etiology is unknown. The patient also had a CABG 13 years ago after which complications occurred. The clinical and angiographic profile of the patient are discussed here supported by literature.

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KEYWORDS: coronary artery bypass grafting, CABG, risk prediction, outcome

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## ABSTRACT:

A 65-year-old patient with LAD ostial stenosis proved by coronary angiography is presented. LAD ostial stenosis is an uncommon condition whose etiology is unknown. The patient also had a CABG 13 years ago after which complications occurred. The clinical and angiographic profile of the patient are discussed here supported by literature.

## Introduction:

Patients undergoing cabg have been reported to develop various complications preoperatively as well as post-operatively. In the long run patients may develop bleeding during or after surgery, blood clots, pneumonia, breathing problems, pancreatitis, kidney failure, heart attack, stroke, lung problems, infection, abnormal heart rhythms, graft failure and death. Coronary ostial stenosis is often recognized through angiography and not clinically. The key factor for determining the treatment is the SYNTAX score as well as the degree of

localization of the lesion. Other factors include ACS, cardiogenic shock and the number of vessels involved. Here, patient who developed ostial stenosis of LAD after 13 years of undergoing cabg is described.

### *Case Report*

A 65-year-old female patient with a history of hypertension came to OPD in S.M.B.B. Trauma Centre, Karachi with the complaint of chest pain and shortness of breath. According to patient she was in usual state when suddenly she started having chest pain that was sharp, high in intensity and radiates to left arm, worsens by exertion and relieved by relaxation and medication. She also has shortness of breath. After taking history and examination, the patient was found to have paroxysmal nocturnal dyspnea and orthopnea. Her pulse was 68 and her blood pressure was 140/100. Past medical history revealed she had hypertension, cholelithiasis and dyslipidemia. In 2008, she was diagnosed with class II angina according to CCS (Canadian Cardiovascular Society) grading. Coronary angiography was carried out in 2008 which revealed triple vessel coronary artery disease and normal Left ventricular ejection fraction (LVEF). She underwent coronary artery bypass graft surgery in 2009. In cabg, long saphenous vein (lsv) was harvested from the right thigh and left leg. The pieces were joined to create appropriate length. Left internal mammary artery (LIMA) was 1.5mm, excellent flow. Lad 1.75mm clean and intramyocardial. Left anterior descending artery (LAD) was grafted with LIMA while obtuse marginal (OM) was grafted with reversed saphenous vein graft. In 2013, Myocardial perfusion imaging (MIBI) was done using 8mCi of Tc-99m isotope which revealed normal findings. Transthoracic echocardiography and doppler study were done in June 2022 which revealed normal size LV, EF 55% and diastolic dysfunction grade I. Graft study was done which revealed left main (LM) and right coronary artery (RCA) were normal, left circumflex artery (LCX) with mild stenosis and obtuse marginal with subtotal stenosis and severe ostial stenosis of LAD was observed in proximal portion which can be seen in figure 1. The patient was found to have ischemic heart disease and coronary syndrome with increased risk of myocardial infarction. The patient is currently on drug therapy of risek, ascard, lipiget, flexiflow, monis, cancos and sofvas. Echocardiogram and ECG of the patient are shown in figure 2 and figure 3 respectively.

### *Discussion:*

Even though results have been steadily improving, CABG is linked to significant morbidity, which has a severe impact on long-term standard of living [1]. When coronary artery bypass grafting (CABG) is used to treat coronary artery disease in conjunction with aortic valve replacement (AVR), long-term survival is improved with tolerable morbidity and mortality [2].

In this instance, the patient had a CABG 13 years prior, and a few years later she began experiencing complications including dyspnea, chest discomfort, prolonged need for mechanical ventilation, and vascular and pulmonary issues. Ostial LAD stenosis was discovered by angiogram, which accounts for the patient's respiratory and cardiac difficulties. Angiogram showed proximal LAD stenosis. Numerous investigations have revealed that lesions in the distal or proximal arteries of the left anterior descending (LAD) are more likely to experience restenosis [3][4].

It is uncertain if the patient's present condition, which includes ostial LAD stenosis, is the result of improper stent placement during angioplasty or for some other cause. In both the short- and long-term, percutaneous revascularization of the proximal left anterior descending coronary artery combined with the placement of drug-eluting stents is a safe and very effective therapeutic approach [3]. Maintaining the balloon in the LM to LCX while inserting the LAD ostial stent is extremely beneficial and may be used in clinical practice [5].

Since the patient has also developed acute coronary syndrome (ACS), immediate PCI is required. Ostial LAD stenting may be a safe, practicable procedure with a reasonable clinical result. Further prospective studies are needed to ascertain the impact on long-term prognosis following coronary bypass surgery, which has a number of problems but does not result in a greater death rate.

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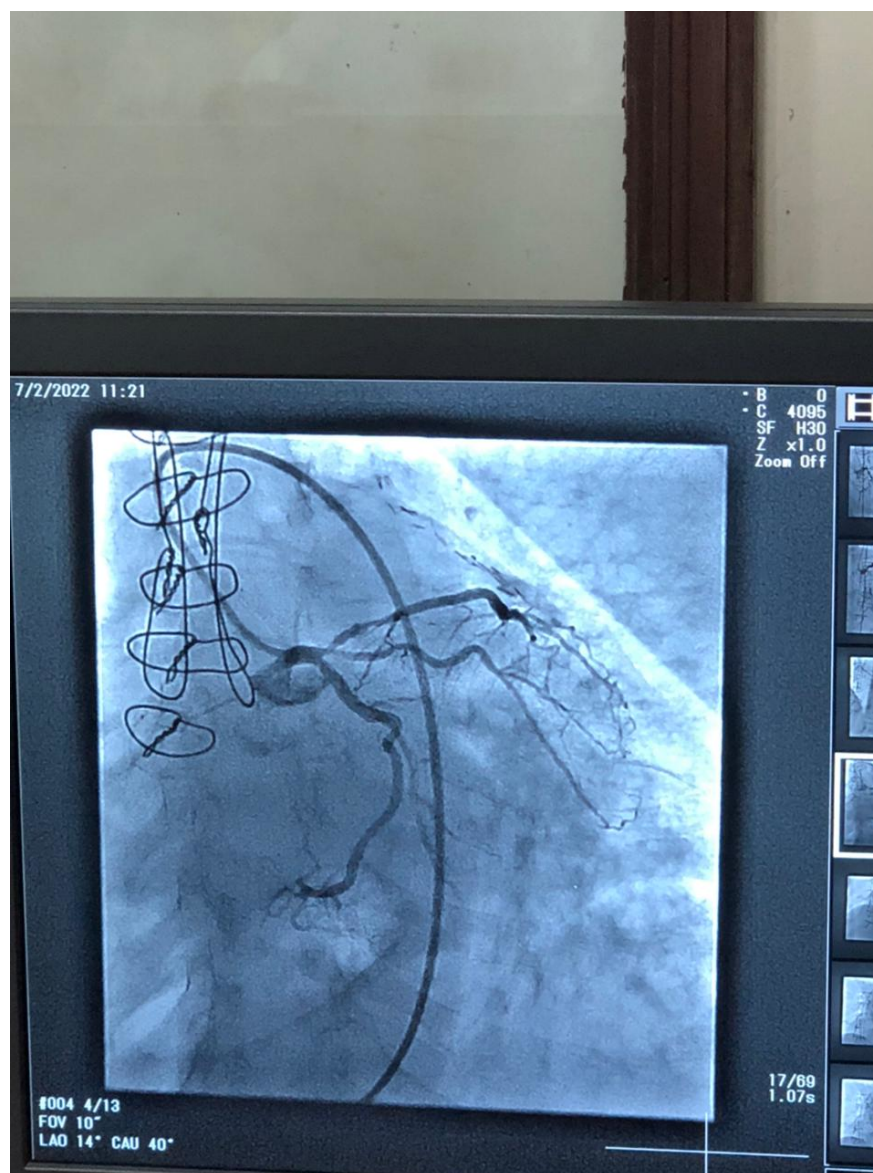


Figure 1: Angiogram of patient showing ostial stenosis

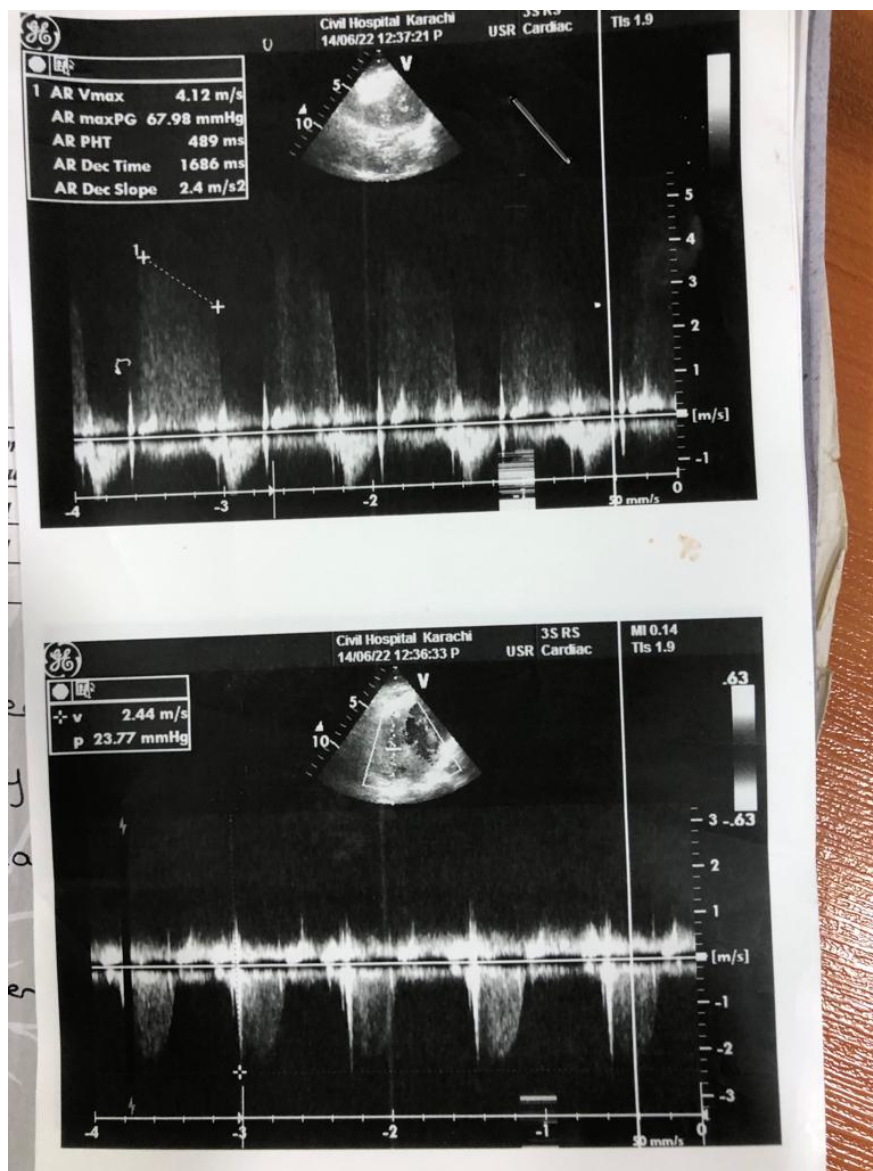


Figure 2: Echocardiogram of the patient



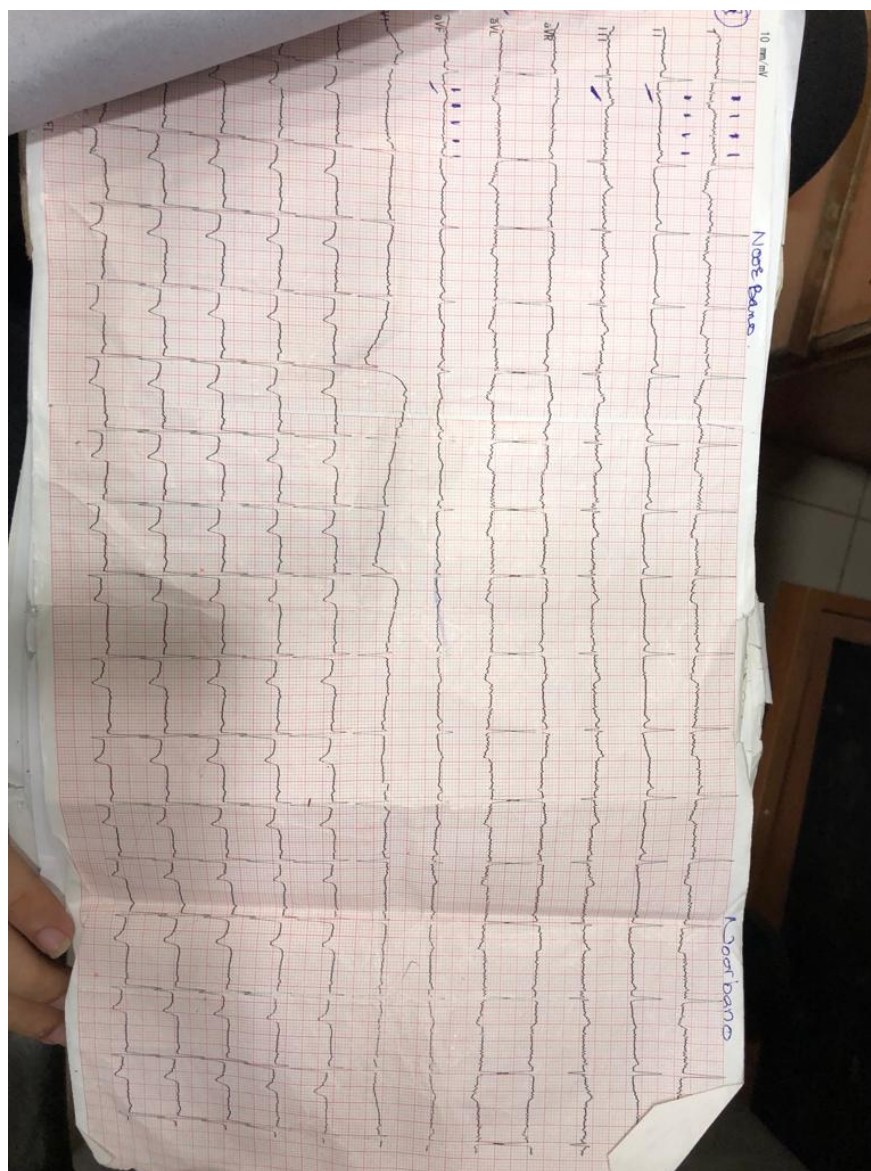


Figure 3: ECG of the patient

# **DECLARATIONS:**

## *Ethics approval and consent to participate:*

This study was approved by the ethics committee of Dow Medical College. Proper consent of participation was obtained from the patient.

## *Consent for publication:*

Consent for publication was obtained from the patient.

## *Data availability Statement:*

All data underlying the results are available as part of the article and no additional source data are required.

*Competing interests:*

There are no conflicts of interest.

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