

SUCCESSFUL STENTING OF ECTATIC CORONARY ARTERY WITH TWO DRUG ELUTING STENTS IN A PATIENT WITH ACUTE CORONARY SYNDROME

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Abstract:

Coronary artery ectasia is characterized by enlargement of the coronary artery 1.5 times or more than the normal artery. It can be found in 3-8% of persons undergoing coronary angiography and 1-2% of autopsy cases¹. Coronary artery ectasia patients could be asymptomatic but some patients may present with exertional chest pain, acute coronary syndrome or sudden cardiac death². Currently there is no clear cut guideline to treat stenotic coronary artery ectasia because of various sizes and types of coronary artery ectasia. Herein we report a 66 year old female presented with persistent chest pain, ECG showing ST coving and deep T wave inversions in V1-V6. Coronary angiography showed ectatic proximal segment followed by tight stenosis of mid segment of left anterior descending coronary artery. She was successfully treated with balloon angioplasty with 2 drug eluting stents with good results.

Key words: Ectatic coronary artery, acute coronary syndrome, Balloon angioplasty

Introduction

Coronary artery ectasia or aneurismal coronary artery disease is localized or diffuse dilatation of coronary artery 1.5 times or more dilatation of adjacent normal coronary artery. As 50% of the coronary artery ectasia are associated with stenotic lesions in coronary arteries some authors believe coronary artery ectasia to be a subset of coronary artery disease.

The right coronary artery is most commonly affected by coronary artery ectasia followed by left circumflex and left anterior descending artery³. This condition is associated with high risk of thrombus formation causing difficulties and catastrophes during coronary intervention. The selection of stent is also difficult due to vessel size mismatch. The deployment of stents also difficult because of large vessel size with mismatch and optimal apposition may not be achieved.

CASE REPORT

66 year old diabetic female presented to ER with 6 hours of central chest pain persistent with sweating. ECG revealed ST coving in V1-V6 with deep T wave inversion. Troponin levels were elevated.

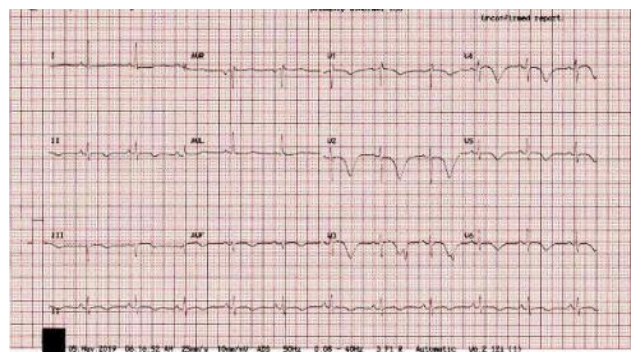


Figure 1: ECG at presentation with ST coving and deep T wave inversion of V1-V6

Echocardiography revealed RWMA in LAD territory with ejection fraction of 50%. A diagnosis of acute coronary syndrome with anterior wall MI was made and patient was hospitalized. Patient was given antiplatelets, aspirin, statin, heparin and coronary angiogram was done. It revealed ectasia of proximal left anterior descending coronary artery with 90% critical stenosis of mid segment. Revascularization the culprit lesion was planned. In right femoral approach, the LMCA was hooked with EBU3.0 6F guide catheter, the lesion was crossed with .014 BMW guide wire. The lesion was predilated with 2x 10 mm balloon. Then the distal lesion was stented with 2.5x 19 mm sirolimus eluting stent. The proximal segment with the ectatic segment of LAD was stented

with another 2.75x19 sirolimus eluting stent overlapping the distal stent. The stents were post dilated with a 3x10 mm non-compliant balloon. The post procedure result was satisfactory with timi-3 flow. The ECG also normalized significantly post procedure. Patient was discharged after 48 hours with no in- hospital events.



Figure 2: ECG post angioplasty with normalization of ST segment and T waves



Figure 3: Coronary angiogram showing ectasia of left anterior descending coronary artery with tight stenosis of mid segment

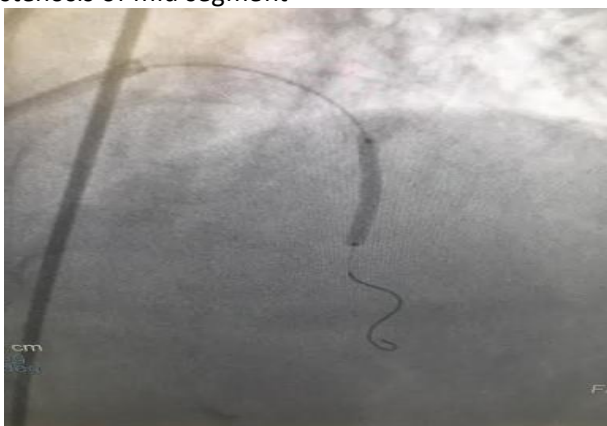


Figure 4: Deployment of distal 2.5x19 mm sirolimus eluting stent



Figure 5: Distally 2.5 x 19 mm sirolimus eluting stent placed (arrow)

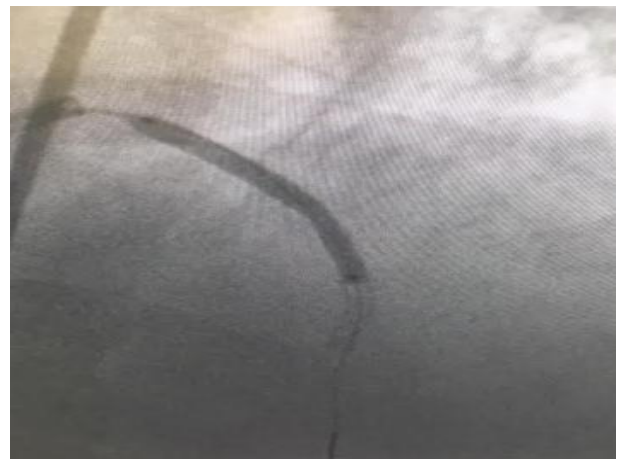


Figure 6: Deployment of proximal 2.75x19 mm sirolimus eluting stent



Figure 7: Final result after deployment of 2nd stent overlapping the distal one and post dilatation

DISCUSSION

Coronary artery ectasia could be treated with medically as well as with percutaneous transluminal angioplasty or bypass graft when indicated. The

medical management includes anticoagulants, antiplatelets, nitrates, nikorandil and trimetazidine⁴. Percutaneous transluminal angioplasty is recommended when medical management fails in severe stenotic lesion or in conditions of acute coronary syndrome. Coronary artery bypass grafting may be required for patients not amenable for stenting⁵.

In ectatic coronary arteries, stent implantation is required for patients with refractory angina not controlled with medical therapy⁶. Because of heterogeneity in morphology of the affected vessel this could be challenge for stent implantation. The appropriate size, type of the stent, optimal stent apposition could be difficult to achieve with current devices⁷. There are no current guidelines for revascularization in ectatic coronary artery.

In our case the patient presented with acute coronary syndrome and angiography revealed tight stenosis. So we planned stenting the culprit lesion with 2 drug eluting stents. With appropriate pre and post dilatation optimal stent expansion was achieved without any complication. Although there are few cases published of balloon angioplasty of ectatic coronary artery, angioplasty of coronary ectasia with stenosis could be done with judicious use of balloons for pre and post dilatation for optimal outcome.

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