The 44th Annual International Congress of the
EGYPTIAN SOCIETY OF CARDIOLOGY
CardioEgypt2017

Inferior STEMI With Critical Left Main Disease

By

Emad Abdel Hay ,Msc

Specilaist of intervention cardiology

Mahalla Cardiac Center

- 70 ys old Male patient
- Known To Be Hypertensive , Diabetic, and Smoker(20c/d)
- with strong family history of coronary artery disease,
- was admitted with typical chest pain

His examination showed :

B/P 80/50 mmHg

Heart rate of 100 b/m

RR 18 c/min

No signs of heart failure(Killip class I)

The **ECG** showed ST elevation in inferior leads II, III, AVF V3-V6.

ST depression in I, AVL , VI, V2.

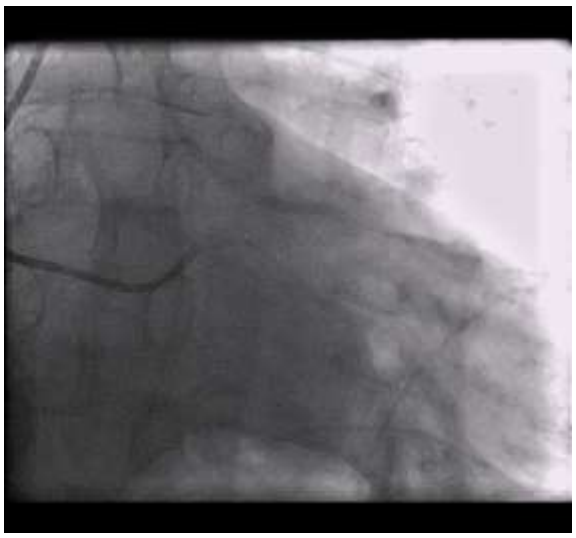
EGYPTIAN SOCIETY OF CARDIOLOGY
CardioEgypt2017

He was Diagnosed as:

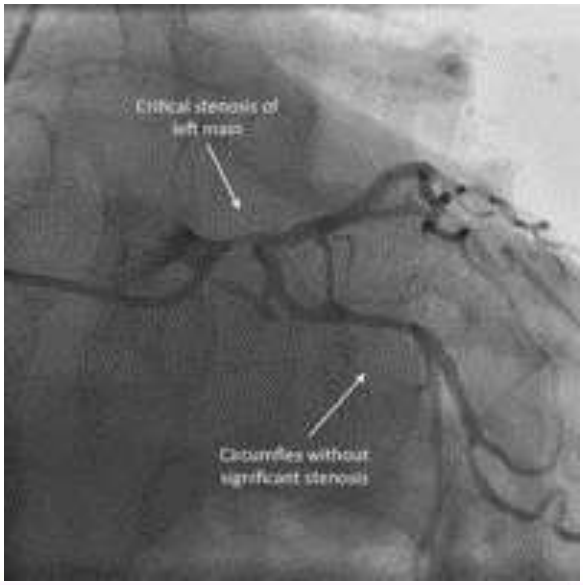
Recent Inferoposterior And Lateral Myocardial infarction

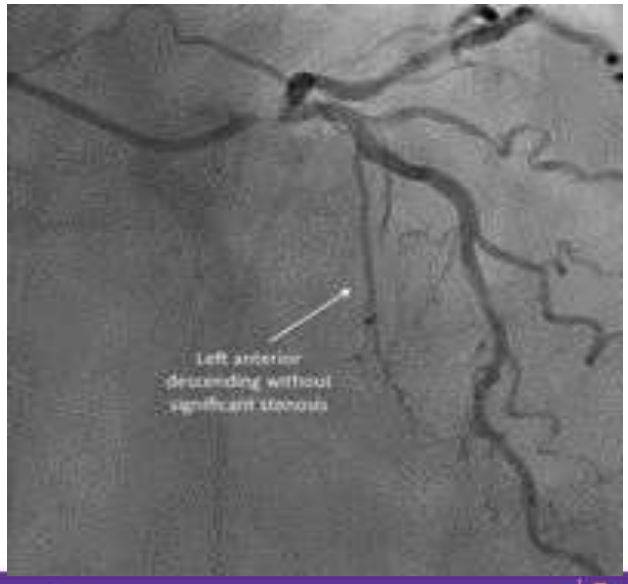
- **He was quickly brought to the cath lab.**
- **His diagnostic coronary angiography , performed through Right Radial Artery**

- His left angiography showed:



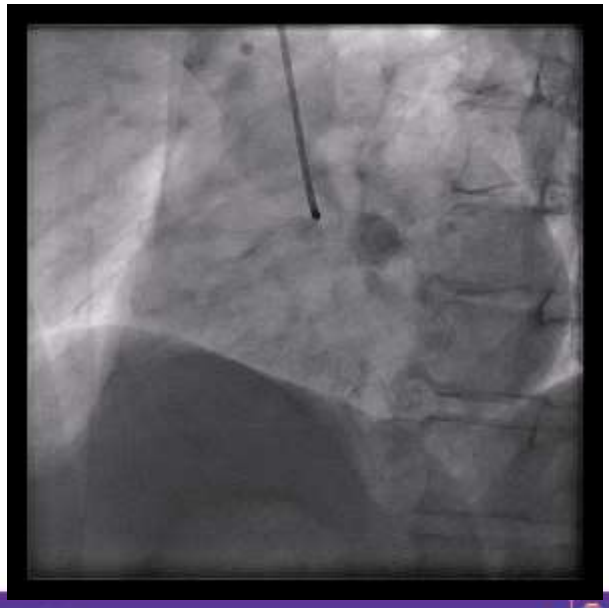
- A critical subtotal stenosis of left main artery.
- Without significant lesion of circumflex (CX) and
- No significant lesion in left anterior descending (LAD) arteries.





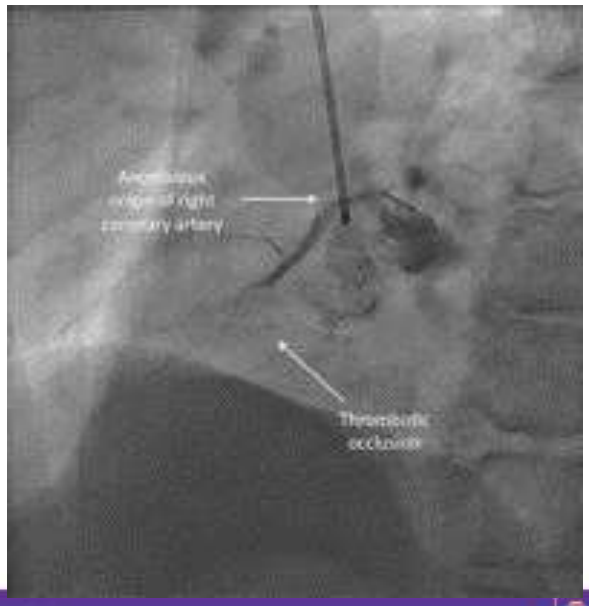
His Right Angiography showed :

EGYPTIAN SOCIETY OF CARDIOLOGY
CardioEgypt2017



- Abnormal origin of right coronary artery (RCA) with mid segment total occlusion

EGYPTIAN SOCIETY OF CARDIOLOGY
CardioEgypt2017



•What should be done now?

- 1 ry PCI to RCA only then LM in another sesseion ?
- or Combined stenting to RCA and Left Main?
- CABG ?

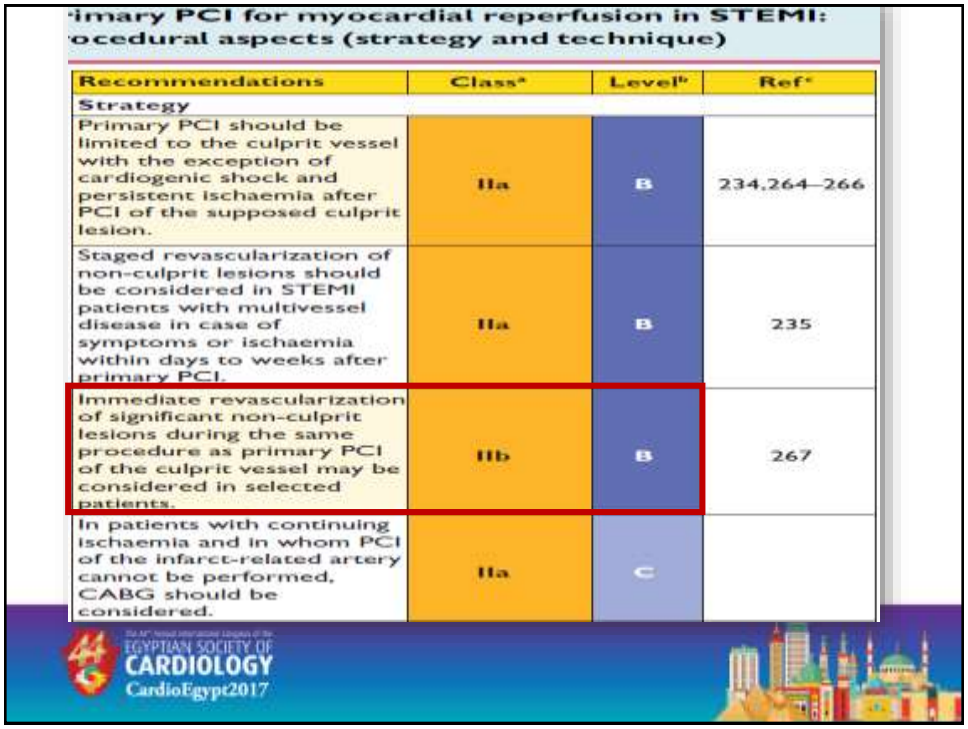
2014 ESC/EACTS Guidelines on myocardial revascularization

8.6 Coronary artery bypass surgery

CABG may be indicated in STEMI patients with unsuitable anatomy for PCI, but who have a patent infarct-related artery, since patency of this artery provides time for transfer to the surgical team and a large myocardial area in jeopardy. It should be considered in patients in cardiogenic shock if the coronary anatomy is not amenable to PCI,[221] or at the time of repair for patients with mechanical complications.[285]

CABG is infrequently used and its benefits are uncertain in STEMI patients with failed PCI, coronary occlusion not amenable to PCI, and in the presence of refractory symptoms after PCI since, in most of these cases, time for implementation of surgical reperfusion will be long and the risks associated with surgery are increased in this setting.[286]

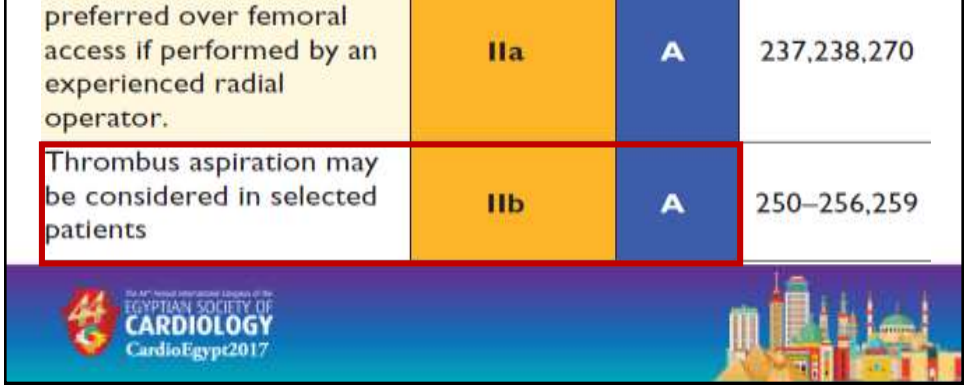
When possible, in the absence of persistent pain or haemodynamic deterioration, a waiting period of 3–7 days appears the best compromise.[286] Patients with multivessel disease, who are receiving primary PCI or secondary (post-fibrinolysis) PCI on the culprit artery, will need risk stratification and further, staged



imary PCI for myocardial reperfusion in STEMI: ocedural aspects (strategy and technique)

Recommendations	Class[a]	Level[b]	Ref[c]
Strategy			
Primary PCI should be limited to the culprit vessel with the exception of cardiogenic shock and persistent ischaemia after PCI of the supposed culprit lesion.	IIa	B	234,264–266
Staged revascularization of non-culprit lesions should be considered in STEMI patients with multivessel disease in case of symptoms or ischaemia within days to weeks after primary PCI.	IIa	B	235
Immediate revascularization of significant non-culprit lesions during the same procedure as primary PCI of the culprit vessel may be considered in selected patients.	IIb	B	267
In patients with continuing ischaemia and in whom PCI of the infarct-related artery cannot be performed, CABG should be considered.	IIa	C	

EGYPTIAN SOCIETY OF CARDIOLOGY
CardioEgypt2017



Technique			
Stenting is recommended (over balloon angioplasty) for primary PCI.	I	A	241,242
New-generation DES are recommended over BMS in primary PCI.	I	A	128,247,248, 268,269
Radial access should be preferred over femoral access if performed by an experienced radial operator.	IIa	A	237,238,270
Thrombus aspiration may be considered in selected patients	IIb	A	250–256,259

EGYPTIAN SOCIETY OF CARDIOLOGY
CardioEgypt2017

Unprotected Left Main Coronary Artery Intervention

for Acute Myocardial Infarction and Cardiogenic Shock

Medical therapy alone often insufficiently alters the clinical course of patients who have experienced acute myocardial infarction and concomitant cardiogenic shock, and in whom the left main coronary artery is the culprit vessel. Emergency coronary artery bypass grafting is an effective yet time-consuming approach that entails the risk of extensive, irreversible myocardial damage. Percutaneous coronary intervention in the unprotected left main coronary artery can enable initial revascularization and rapid stabilization even in high-risk patients, but outcomes from the procedure since the recent advent of drug-eluting stents are still being determined.

Herein, we report the successful deployment of a sirolimus-eluting stent in a 65-year-old man who had experienced acute myocardial infarction and cardiogenic shock consequent to an occluded left main coronary artery. The patient recovered rapidly and completely. We review the medical literature and compare percutaneous coronary intervention with other methods of treatment **(Tex Heart Inst J 2007;34:479-84)**

Conclusion

As PCI evolves and as additional studies are conducted, more cardiologists are undertaking unprotected-LMCA PCI. Emergency PCI of a culprit LMCA lesion may prove valuable in the initial revascularization and rapid stabilization of the patient who experiences acute myocardial infarction and concomitant cardiogenic shock. In our patient, deployment of a sirolimus-eluting stent in the LMCA enabled prompt restoration of coronary blood flow before extensive myocardial necrosis occurred. The result was a substantial improvement in the patient's hemodynamic status.

EGYPTIAN SOCIETY OF CARDIOLOGY
CardioEgypt2017

JACC: CARDIOVASCULAR INTERVENTIONS
© 2010 BY THE AMERICAN COLLEGE OF CARDIOLOGY FOUNDATION
PUBLISHED BY ELSEVIER INC.

VOL. 3, NO. 8, 2010
ISSN 1936-8798/10$36.00
DOI: 10.1016/j.jcin.2010.06.002

STATE-OF-THE-ART PAPER

Unprotected Left Main Coronary Disease and ST-Segment Elevation Myocardial Infarction

A Contemporary Review and Argument for Percutaneous Coronary Intervention

Michael S. Lee, MD,* Pooya Bokhoor, MD,* Seung-Jung Park, MD,† Young-Hak Kim, MD,†
Gregg W. Stone, MD,‡ Imad Sheiban, MD,§ Giuseppe Biondi-Zoccai, MD,§
Dario Sillano, MD,§ Jonathan Tobis, MD,* David E. Kandzari, MD‖

Los Angeles and La Jolla, California; Seoul, South Korea; New York, New York; and Turin, Italy

Acute occlusion involving the unprotected left main coronary artery (ULMCA) is a clinically catastrophic event, often leading to abrupt and severe circulatory failure, lethal arrhythmias, and sudden cardiac

cardiogenic shock, persistent ventricular arrhythmias, and significant comorbidities. The higher risk of target vessel revascularization associated with ULMCA PCI compared with CABG is an acceptable tradeoff given the primary need for rapid reperfusion to enhance survival. (J Am Coll Cardiol Intv 2010;3:791–5) © 2010 by the American College of Cardiology Foundation

vessel revascularization associated with ULMCA PCI compared with CABG is an acceptable tradeoff given the primary need for rapid reperfusion to enhance survival. (J Am Coll Cardiol Intv 2010;3:791–5) © 2010 by the American College of Cardiology Foundation

JACC: CARDIOVASCULAR INTERVENTIONS
© 2011 BY THE AMERICAN COLLEGE OF CARDIOLOGY FOUNDATION
PUBLISHED BY ELSEVIER INC.

VOL. 4, NO. 6, 2011
ISSN 1936-8798/$36.00
DOI: 10.1016/j.jcin.2011.02.016

Percutaneous Coronary Intervention of Unprotected Left Main Coronary Artery Disease as Culprit Lesion in Patients With Acute Myocardial Infarction

Alessandro Pappalardo, MD,* Mamas A. Mamas, MD,‡ Fabrizio Imola, MD,*
Vito Ramazzotti, MD,* Alessandro Manzoli, MD,* Francesco Prati, MD,*†
Magdi El-Omar, MD‡

Rome, Italy; and Manchester, United Kingdom

Objectives This study sought to evaluate short- and long-term outcomes of patients undergoing emergency percutaneous coronary intervention (PCI) for acute myocardial infarction due to a culprit lesion in an unprotected left main coronary artery.

Conclusions Patients with acute myocardial infarction and thrombosis of the unprotected left main coronary artery are a high-risk subgroup with a substantial mortality, particularly if they present in cardiogenic shock. We demonstrate that in these patients, PCI is a feasible treatment option associated with reasonably good outcomes. Long-term prognosis is excellent in hospital survivors with an 89.5% survival rate at 1 year. (J Am Coll Cardiol Intv 2011;4:618–26) © 2011 by the American College of Cardiology Foundation

EGYPTIAN SOCIETY OF CARDIOLOGY
CardioEgypt2017

VIA MEDICA

ORIGINAL ARTICLE

Cardiology Journal
2013, Vol. 20, No. 2, pp. 190–196
DOI: 10.5603/CJ.2013.0033

ISSN 1897–5593

Acute myocardial infarction due to left main coronary artery disease: A large multicenter national registry

Marcin Sadowski[1], Wojciech Gutkowski[2], Agnieszka Janion-Sadowska[1], Mariusz Gąsior[2], Marek Gierlotka[2], Marianna Janion[1,3], Lech Poloński[2]

[1]Swietokrzyskie Cardiology Center, Kielce, Poland
[2]Silesian Center for Heart Diseases, Zabrze, Poland
[3]The Jan Kochanowski University, Kielce, Poland

Methods: *A total of 643 consecutive patients (184 [28.6%] females and 459 [71.4%] males) with acute MI due to critical ULMCA stenosis were selected from the population of 121,526 patients hospitalized due to acute coronary syndromes between 2003 and 2006. The primary*

Conclusions: *No significant differences in clinical course, treatment and prognosis between men and women were noted. Mortality remained very high in both genders. The most unfavorable prognostic factors were cardiogenic shock, pulmonary edema, STEMI and advanced age. Percutaneous coronary angioplasty is feasible and offers high success rate in this subset of patients.* (Cardiol J 2013; 20, 2: 190–196)

vorable prognostic factors were cardiogenic shock, pulmonary edema, STEMI and advanced age. Percutaneous coronary angioplasty is feasible and offers high success rate in this subset of patients. (Cardiol J 2013; 20, 2: 190–196)

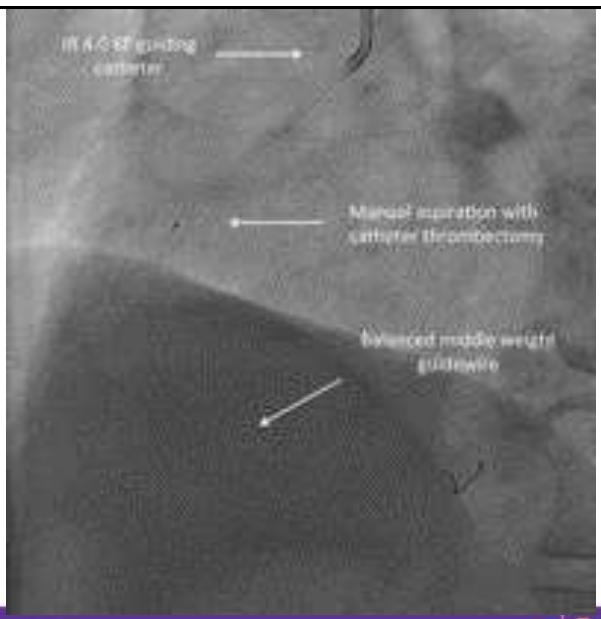
EGYPTIAN SOCIETY OF CARDIOLOGY
CardioEgypt2017

So CABG during acute MI is not an option if PCI is feasible
I took the risk and proceed to do 1ry PCI and full revascularisation after high risk consent .

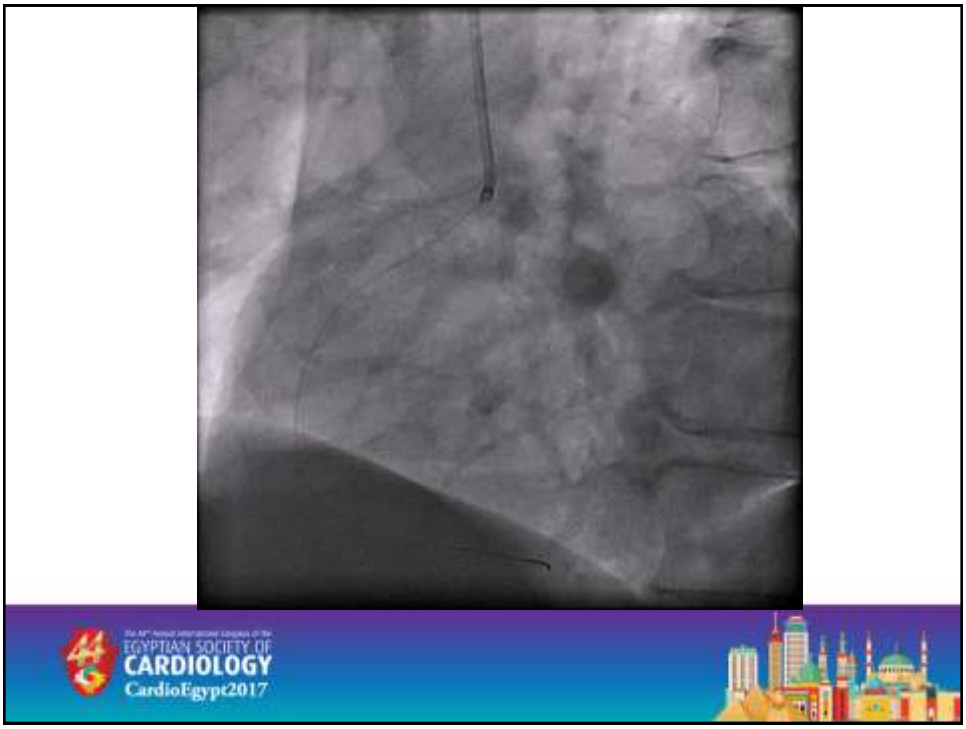
- A loading dose of Ticagrelor 180 mg was administrated.
- 10,000 IU of Heparin
- Judkin Right guiding catheter JR4 f was used
- A Balanced Middle Weight (BMW) Guidewire was put in RCA

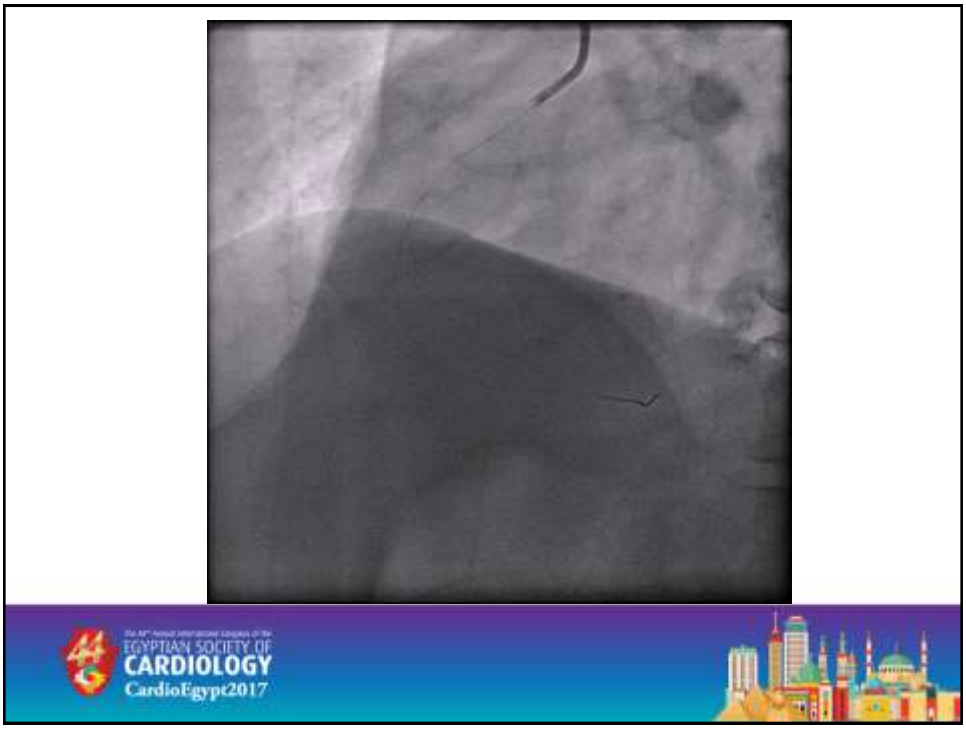
And Manual Aspiration Thrombectomy device was performed allowing a TIMI III flow to RCA

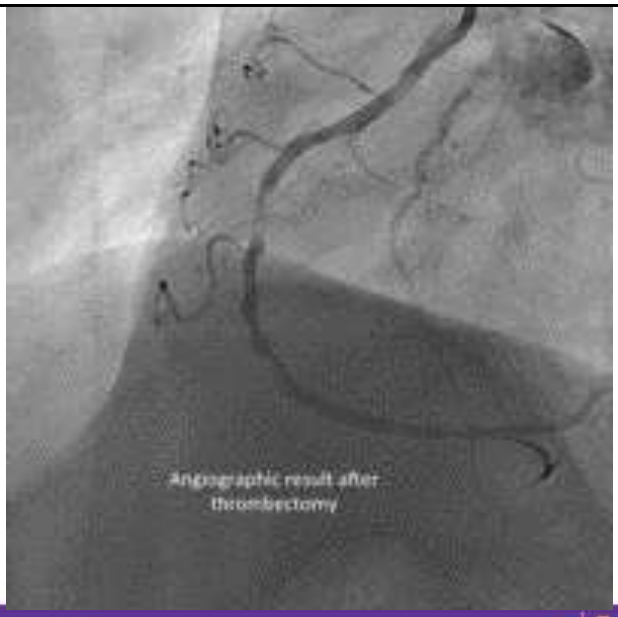
then Chest pain gradually decreased .



EGYPTIAN SOCIETY OF CARDIOLOGY
CardioEgypt2017


EGYPTIAN SOCIETY OF
CARDIOLOGY
CardioEgypt2017

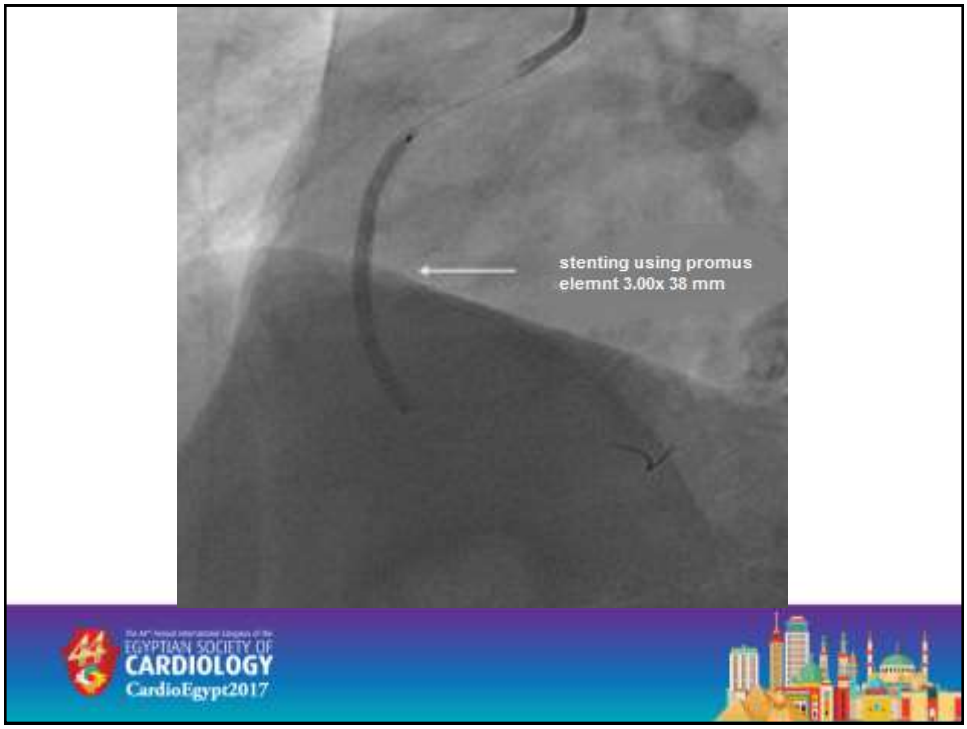

EGYPTIAN SOCIETY OF
CARDIOLOGY
CardioEgypt2017

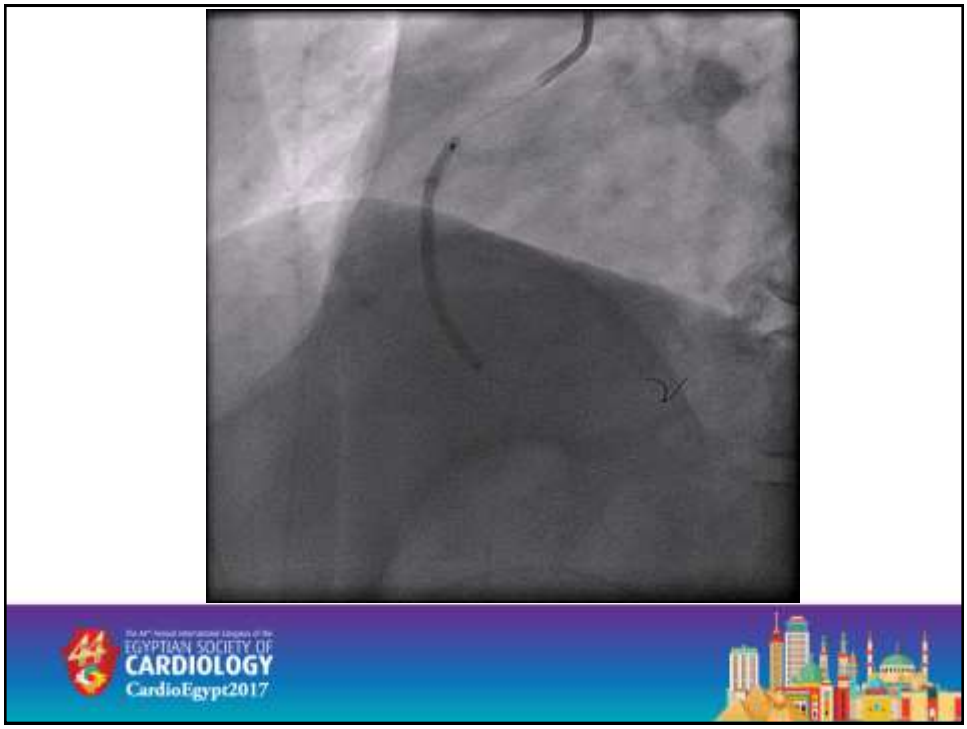


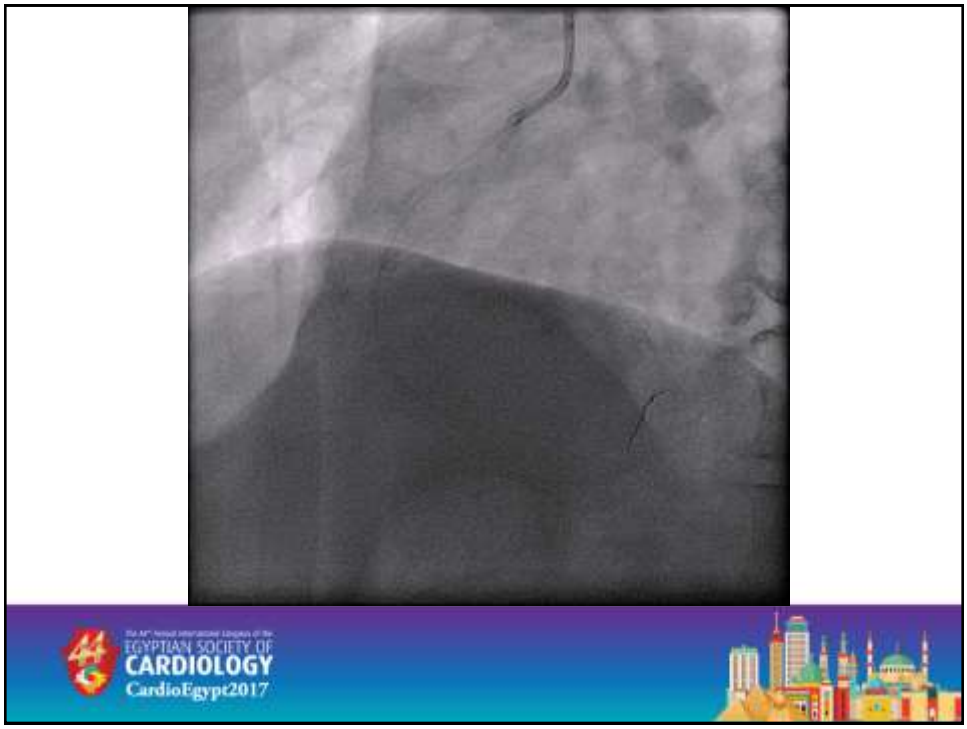
EGYPTIAN SOCIETY OF CARDIOLOGY
CardioEgypt2017

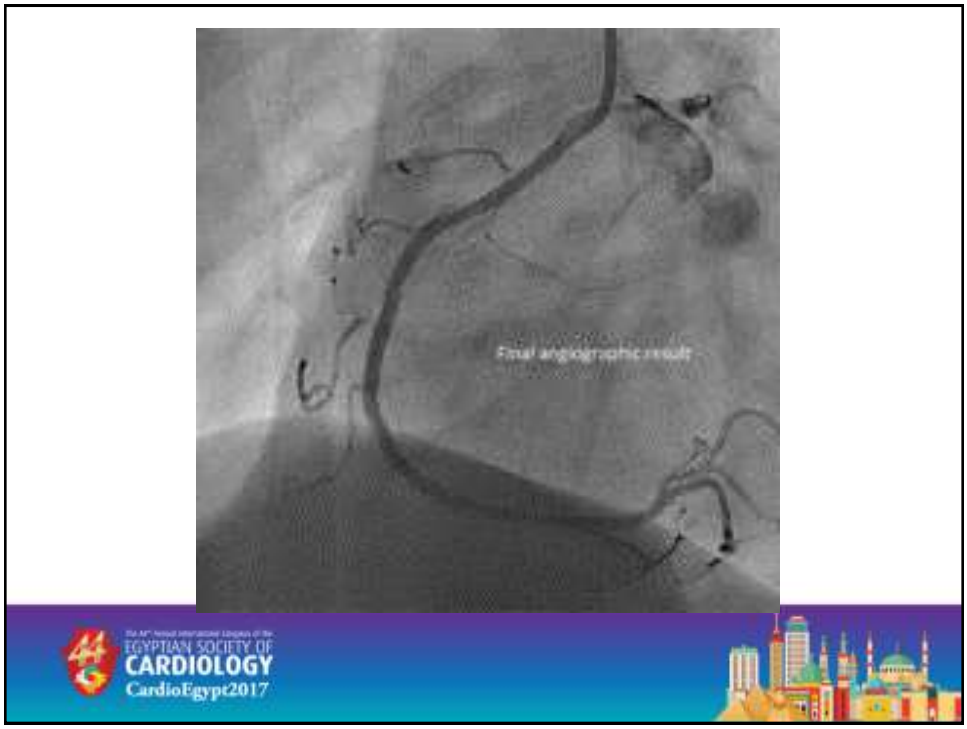
- The RCA was treated with pre-dilatation using a semi compliant balloon 2.0 x 12 mm
- Followed by stenting with a Promus Element DES 3.0 x 38 mm.
- The final angiographic result was very good .

EGYPTIAN SOCIETY OF CARDIOLOGY
CardioEgypt2017


stenting using promus
elemnt 3.00x 38 mm
EGYPTIAN SOCIETY OF
CARDIOLOGY
CardioEgypt2017

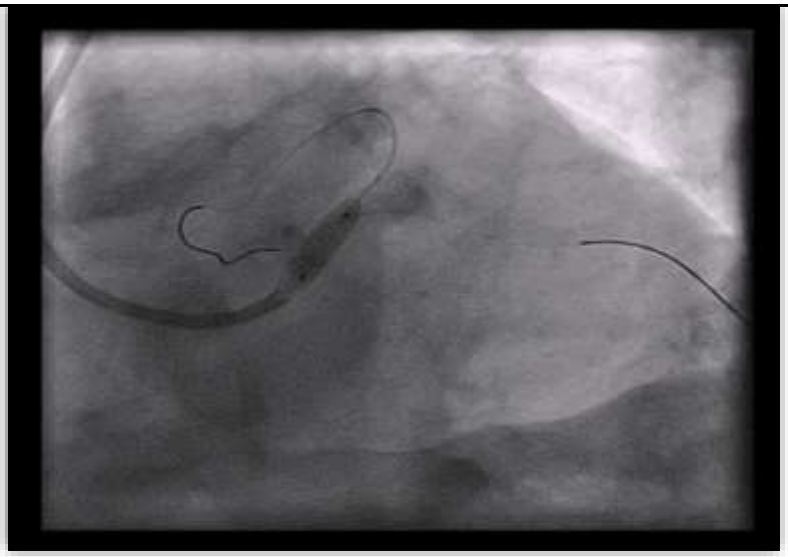

EGYPTIAN SOCIETY OF
CARDIOLOGY
CardioEgypt2017


EGYPTIAN SOCIETY OF
CARDIOLOGY
CardioEgypt2017

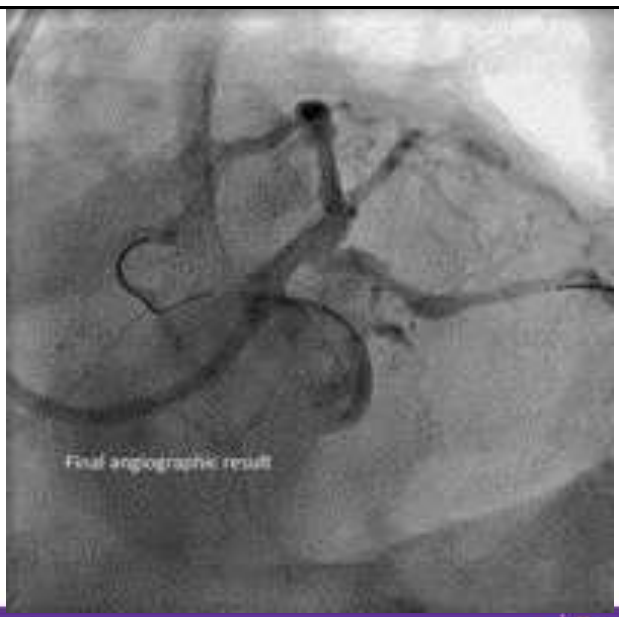

Final angiographic result
EGYPTIAN SOCIETY OF
CARDIOLOGY
CardioEgypt2017

Before proceeding to left main revascularization
Using XB 3.5 f Guiding catheter
2 Balanced Middle Weight (BMW) guidewires were put in the left anterior descending(LAD) and circumflex coronary(LCX) arteries respectively.

- The lesion was predilated with a semi compliant balloon 2.5 x 15mm.
- Stenting using Promus Element 3.5 x 16 mm.
- Final flaring to osteal of Lt Main using Non compliant ballon 4.0 x 12 mm



EGYPTIAN SOCIETY OF CARDIOLOGY
CardioEgypt2017



EGYPTIAN SOCIETY OF CARDIOLOGY
CardioEgypt2017

After stenting Lt Main
The Heaemodynamics of the patient began to improve
Bp became 130/80 mmhg
without chest pain
The procedure was done using 300 ml of contrast

- The patient was discharged 3 days later with the following therapy:
- Aspirin 100 mg/day,
- Ticagrelor 90 mg twice /day ,
- Atorvastatin 40 mg/day,
- Bisoprolol 2.5 mg/day,
- Ramipril 2.5 mg/day and
- Pantoprazol 40 mg/day.


Thank You
EGYPTIAN SOCIETY OF
CARDIOLOGY
CardioEgypt2017