



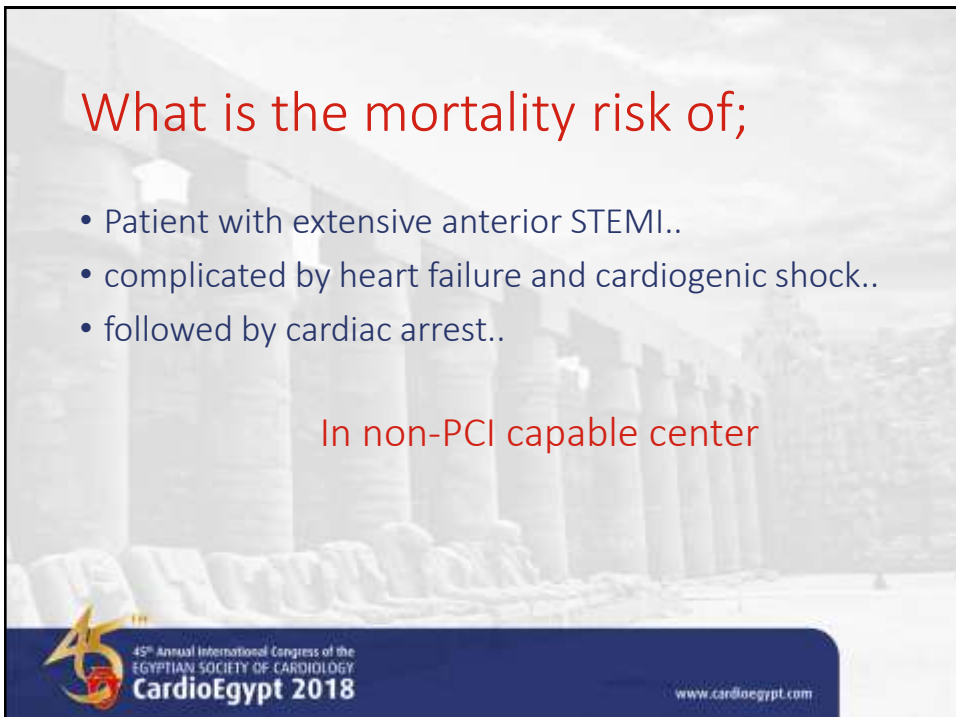
Egyptian Society of  
CARDIOLOGY

Minouha University    Tanta University    Zagazig University

45<sup>TH</sup>  
45<sup>th</sup> Annual International Congress of the  
EGYPTIAN SOCIETY OF CARDIOLOGY  
**CardioEgypt 2018**

**MINOCA**  
Myocardial Infarction with Non  
Obstructive Coronary arteries

By: Nashwa Ali



**What is the mortality risk of;**

- Patient with extensive anterior STEMI..
- complicated by heart failure and cardiogenic shock..
- followed by cardiac arrest..

**In non-PCI capable center**

45<sup>TH</sup>  
45<sup>th</sup> Annual International Congress of the  
EGYPTIAN SOCIETY OF CARDIOLOGY  
**CardioEgypt 2018**

[www.cardioegypt.com](http://www.cardioegypt.com)

## Clinical scenario:

- 54 year old, male patient.
- Hypertensive, smoker & non diabetic.
- Presented to our ER at 01:00am in Al Minya Health Insurance Hospital with severe typical anginal pain.
- His symptoms started 45 minutes before presentation.
- He was very anxious with profuse sweating and cold extremities.



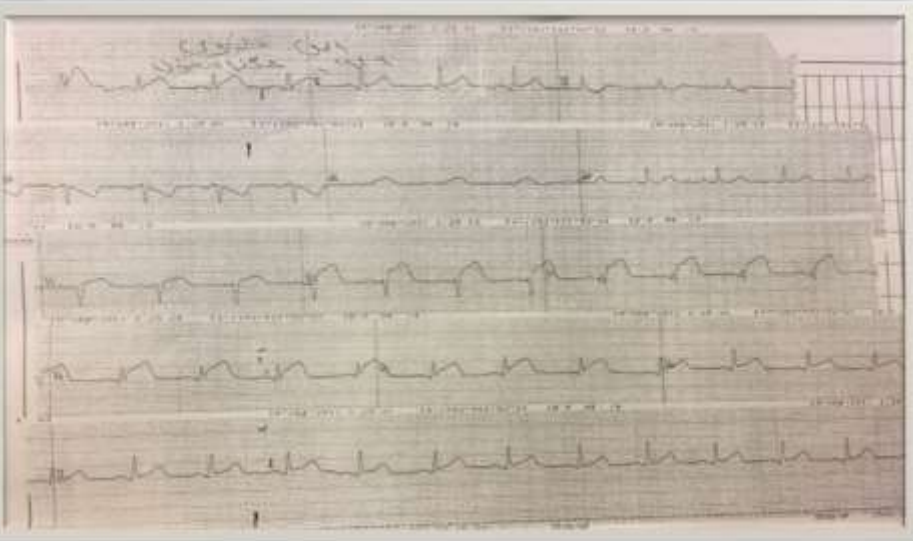
[www.cardioegypt.com](http://www.cardioegypt.com)

- SBP: 70mmhg.
- HR: 90 b/m.
- Heart ex.: gallop rhythm
- Chest ex.: bilateral basal crepitus.
- High JVP.

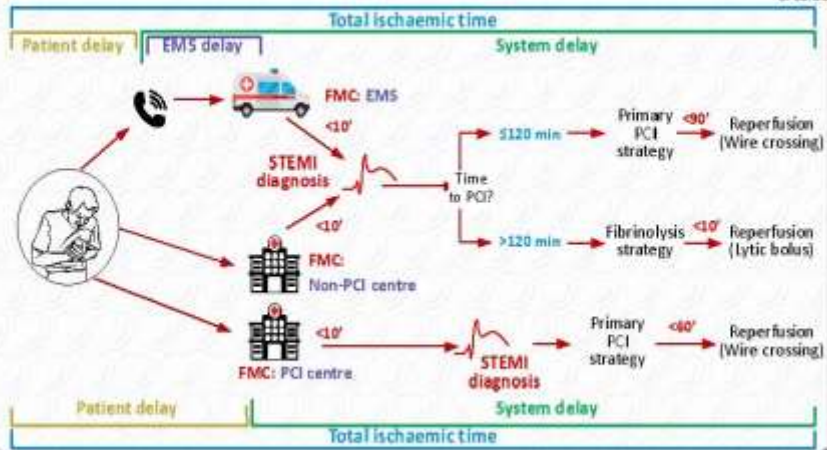


[www.cardioegypt.com](http://www.cardioegypt.com)

# ECG:



## Modes of patient presentation, components of ischaemic time and flowchart for reperfusion strategy selection



www.escardio.org/guidelines 2017 ESC Guidelines for the Management of AMI STEMI (European Heart Journal 2017 - doi:10.1093/eurheartj/ehx095) 14

## Management of cardiogenic shock in ST-elevation myocardial infarction (continued)



Recommendations	Class	Level
Fibrinolysis should be considered in patients presenting with cardiogenic shock if a primary PCI strategy is not available within 120 min from STEMI diagnosis and mechanical complications have been ruled out.	Ila	C
Complete revascularization during the index procedure should be considered in patients presenting with cardiogenic shock.	Ila	C
Intra-aortic balloon pumping should be considered in patients with haemodynamic instability/cardiogenic shock due to mechanical complications.	Ila	C
Haemodynamic assessment with pulmonary artery catheter may be considered for confirming diagnosis or guiding therapy.	Iib	B

[www.escardio.org/guidelines](http://www.escardio.org/guidelines) 2017 ESC Guidelines for the Management of AMI-STEMI (European Heart Journal 2017 - doi:10.1093/eurheartj/ehx095)

73



45<sup>th</sup> Annual International Congress of the  
EGYPTIAN SOCIETY OF CARDIOLOGY  
**CardioEgypt 2018**

[www.cardioegypt.com](http://www.cardioegypt.com)

## Initial management:

- 300mg of ASA.
- 300mg of clopidogrel.
- Thrombolytic (streptokinase) was started...

After around 5 min



45<sup>th</sup> Annual International Congress of the  
EGYPTIAN SOCIETY OF CARDIOLOGY  
**CardioEgypt 2018**

[www.cardioegypt.com](http://www.cardioegypt.com)

- VF....
- Cardiac arrest .....so

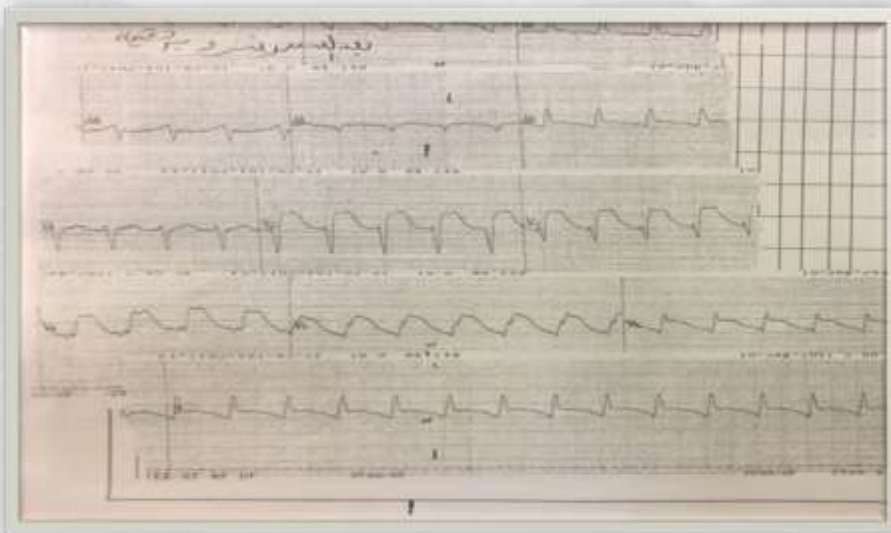
## CPR

- CPR lasted for 15 min and now
- Pt is deeply comatosed....
- With no BP on +ve inotropes...
- On mechanical ventilator.
- And ECG:



45<sup>th</sup> Annual International Congress of the  
EGYPTIAN SOCIETY OF CARDIOLOGY  
**CardioEgypt 2018**

[www.cardioegypt.com](http://www.cardioegypt.com)



45<sup>th</sup> Annual International Congress of the  
EGYPTIAN SOCIETY OF CARDIOLOGY  
**CardioEgypt 2018**

[www.cardioegypt.com](http://www.cardioegypt.com)

## Will you continue streptokinase ?!!!

### Contra-indications to fibrinolytic therapy



Relative
Transient ischaemic attack in the preceding 6 months.
Oral anticoagulant therapy.
Pregnancy or within 1 week postpartum.
Refractory hypertension (SBP >180 mmHg and/or DBP >110 mmHg).
Advanced liver disease.
Infective endocarditis.
Active peptic ulcer.
Prolonged or traumatic resuscitation.

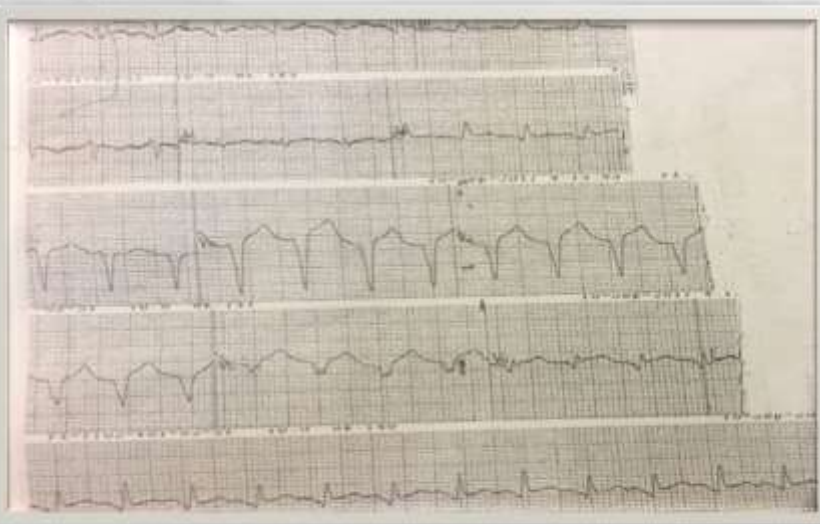
[www.escardio.org/guidelines](http://www.escardio.org/guidelines) 2017 ESC Guidelines for the Management of AMI STEMI (European Heart Journal 2017 - doi:10.1093/eurheartj/ehw385) 44



45<sup>th</sup> Annual International Congress of the  
EGYPTIAN SOCIETY OF CARDIOLOGY  
**CardioEgypt 2018**

[www.cardioegypt.com](http://www.cardioegypt.com)

## ECG after 90 min:



45<sup>th</sup> Annual International Congress of the  
EGYPTIAN SOCIETY OF CARDIOLOGY  
**CardioEgypt 2018**

[www.cardioegypt.com](http://www.cardioegypt.com)

## After 15 hours:

- Patient was fully conscious.
- Weaned from +ve inotropes ....
- Weaned from mechanical ventilator...
- Bed side echo :
  - Moderately impaired LV systolic function.
  - EF = 48%.
  - RWMA
  - Trivial TR
- Transferred for CA;



45<sup>th</sup> Annual International Congress of the  
EGYPTIAN SOCIETY OF CARDIOLOGY  
**CardioEgypt 2018**

www.cardioegypt.com

## Fibrinolytic therapy (continued)



Recommendations	Class	Level
<b>Interventions following fibrinolysis</b>		
Emergency angiography and PCI if indicated is recommended in patients with heart failure/shock.	I	A
Rescue PCI is indicated immediately when fibrinolysis has failed (< 50% ST-segment resolution at 60-90 min) or at any time in the presence of haemodynamic or electrical instability, or worsening ischaemia.	I	A
Angiography and PCI of the IRA, if indicated, is recommended between 2 and 24 hours after successful fibrinolysis.	I	A
<b>Transfer after fibrinolysis</b>		
Transfer to a PCI-capable centre following fibrinolysis is indicated in all patients immediately after fibrinolysis.	I	A

www.escardio.org/guidelines 2017 ESC Guidelines for the Management of AMI-STEMI (European Heart Journal 2017 - doi:10.1093/eurheartj/ehx095) 38

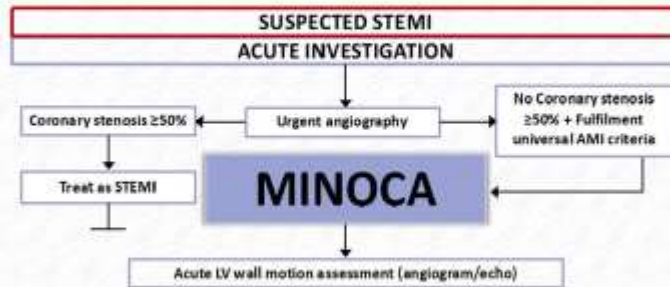


45<sup>th</sup> Annual International Congress of the  
EGYPTIAN SOCIETY OF CARDIOLOGY  
**CardioEgypt 2018**

www.cardioegypt.com

## Will you call it MINOCA ?!!!!

### Diagnostic test flow chart in MINOCA



[www.escardio.org/guidelines](http://www.escardio.org/guidelines) 2017 ESC Guidelines for the Management of AMI-STEMI European Heart Journal 2017 | doi:10.1093/eurheartj/ehx095 34



45<sup>th</sup> Annual International Congress of the  
EGYPTIAN SOCIETY OF CARDIOLOGY  
**CardioEgypt 2018**

[www.cardioegypt.com](http://www.cardioegypt.com)

## Take home messages:

- Early reperfusion do save lives.
- Do your best and don't lose hope...
- Remember that

Guidelines were made for a reason



45<sup>th</sup> Annual International Congress of the  
EGYPTIAN SOCIETY OF CARDIOLOGY  
**CardioEgypt 2018**

[www.cardioegypt.com](http://www.cardioegypt.com)