Acute Coronary Syndrome STEMI Systems of Care: Evolving Best Practices

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Ensuring Timely Reperfusion

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Disclosure Information

- **I will not discuss off label use or investigational use in my presentation**

- **I have no financial relationships to disclose**

Ensuring Timely Reperfusion

1. Time is muscle

2. Immediate treatment: The golden objective
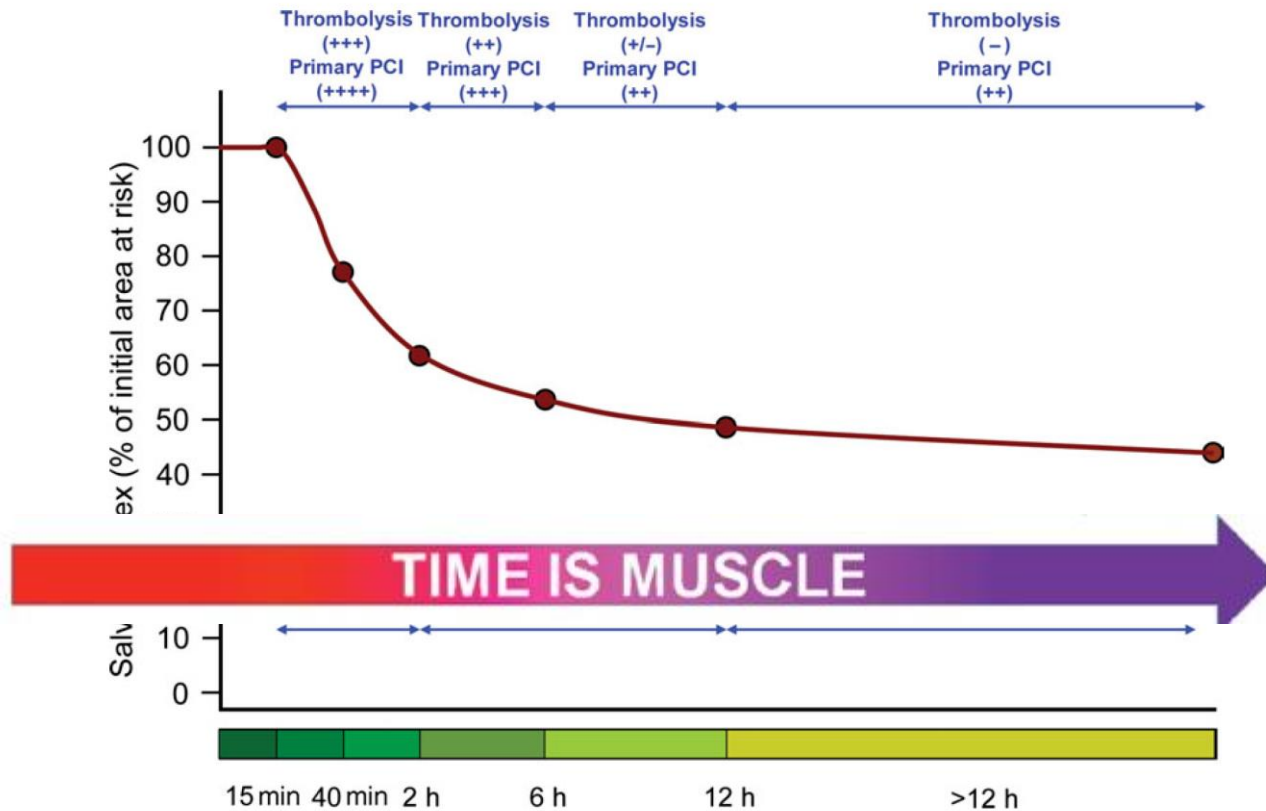
3. How to transform reperfusion therapy in STEMI

1. Time is Muscle

Thrombolysis (+++) Primary PCI (++++) | Thrombolysis (++) Primary PCI (+++) | Thrombolysis (+/−) Primary PCI (++) | Thrombolysis (−) Primary PCI (++)

TIME IS MUSCLE

15 min 40 min 2 h   6 h   12 h   >12 h

Schömig A. Eur Heart J 2006;27:1900–7
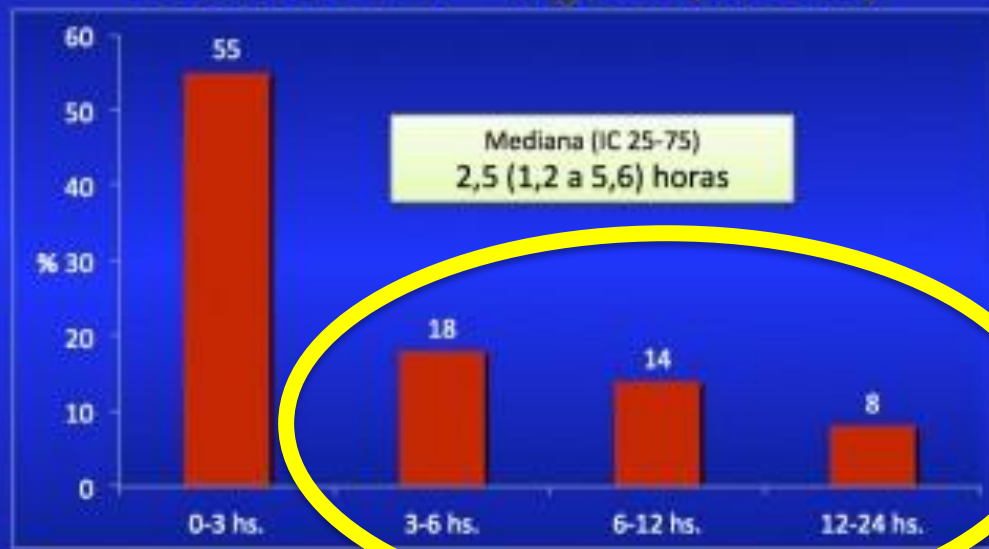
2. Immediate Treatment: The Golden Objective

STEMI patient who is a candidate for reperfusion

Initially seen at a PCI-capable hospital

Initially seen at a non–PCI-capable hospital*

DIDO time ≤30 min

Send to cath lab for primary PCI

FMC-device time ≤90 min

(Class I, LOE: A)

Transfer for primary PCI

FMC-device time as soon as possible and ≤120 min

(Class I, LOE: B)

Administer fibrinolytic agent within 30 min of arrival when anticipated FMC-device >120 min

(Class I, LOE: B)

Diagnostic angiogram

Medical therapy only

PCI

CABG

Urgent transfer for PCI for patients with evidence of failed reperfusion or reocclusion

(Class IIa, LOE: B)

Transfer for angiography and revascularization within 3-24 h for other patients as part of an invasive strategy†

(Class IIa, LOE: B)
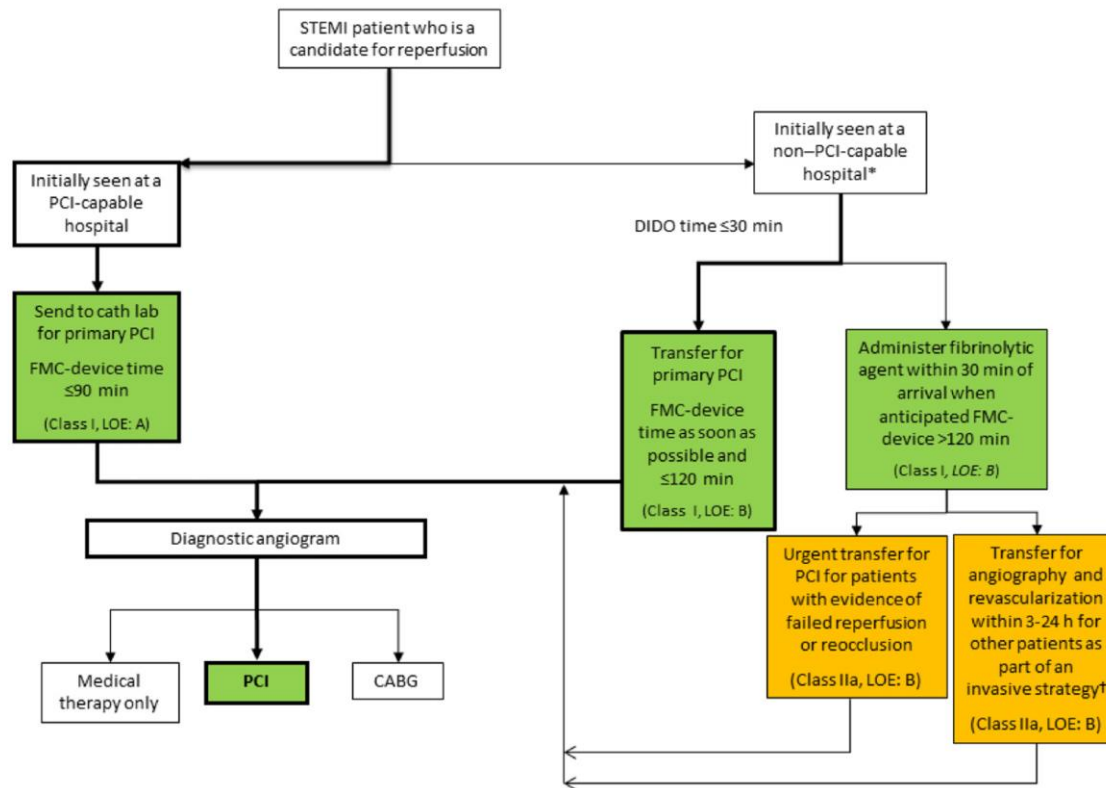
2013 ACCF/AHA guideline for the management of STEMI. J Am Coll Cardiol. 2013;61:e78-140

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Regional Systems of STEMI Care, Reperfusion Therapy, and Time-to-Treatment Goals: Recommendations

CLASS I

1. All communities should create and maintain a regional system of STEMI care that includes assessment and continuous quality improvement of EMS and hospital-based activities. Performance can be facilitated by participating in programs such as Mission: Lifeline and the D2B Alliance (B)

2. Performance of a 12-lead ECG by EMS personnel at the site of first medical contact is recommended in patients with symptoms consistent with STEMI (B)

2013 ACCF/AHA guideline for the management of STEMI. J Am Coll Cardiol. 2013;61:e78-140

Regional Systems of STEMI Care, Reperfusion Therapy, and Time-to-Treatment Goals: Recommendations

CLASS I

3. Reperfusion therapy should be administered to all eligible patients with STEMI with symptom onset within the prior 12 hours (A)

4. Primary PCI is the recommended method of reperfusion when it can be performed in a timely fashion by experienced operators (A)

5. EMS transport directly to a PCI-capable hospital for primary PCI is the recommended triage strategy for patients with STEMI, with an ideal FMC-to-device time system goal of 90 minutes or less (B)

2013 ACCF/AHA guideline for the management of STEMI. J Am Coll Cardiol. 2013;61:e78-140

Regional Systems of STEMI Care, Reperfusion Therapy, and Time-to-Treatment Goals: Recommendations

CLASS I

6. **Immediate transfer to a PCI-capable hospital for primary PCI is the recommended triage strategy for patients with STEMI who initially arrive at or are transported to a non–PCI-capable hospital, with an FMC-to-device time system goal of 120 minutes or less (B)**

Regional Systems of STEMI Care, Reperfusion Therapy, and Time-to-Treatment Goals: Recommendations

CLASS I

7. In the absence of contraindications, fibrinolytic therapy should be administered to patients with STEMI at non–PCI-capable hospitals when the anticipated FMC-to-device time at a PCIcapable hospital exceeds 120 minutes because of unavoidable delays (B)

8. When fibrinolytic therapy is indicated or chosen as the primary reperfusion strategy, it should be administered within 30 minutes of hospital arrival (B)

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Regional Systems of STEMI Care, Reperfusion Therapy, and Time-to-Treatment Goals: Recommendations

CLASS IIa

1. **Reperfusion therapy is reasonable for patients with STEMI and symptom onset within the prior 12 to 24 hours who have clinical and/or ECG evidence of ongoing ischemia. Primary PCI is the preferred strategy in this population (B)**

Regional Systems of STEMI Care, Reperfusion Therapy, and Time-to-Treatment Goals: Recommendations

FOR ANY INDIVIDUAL PATIENT, EVERY EFFORT SHOULD BE MADE TO PROVIDE REPERFUSION THERAPY AS RAPIDLY AS POSSIBLE

2013 ACCF/AHA guideline for the management of STEMI. J Am Coll Cardiol. 2013;61:e78-140

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3. How to Transform Reperfusion Therapy in STEMI

Strategies For Shortening Door-to-Device Times

1. Door-to-ECG time

2. ECG–to–catheterization laboratory time

3. Laboratory arrival–to–device time

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Checklist. Improving Door-to-Device Times

1. Prehospital ECG to diagnose STEMI is used to activate the PCI team while the patient is en route to the hospital

6. Direct transfer to primary angioplasty?

7. Prehospital fibrinolytic therapy?

5. Timely data feedback and analysis are provided to members of the STEMI care team

2013 ACCF/AHA guideline for the management of STEMI. J Am Coll Cardiol. 2013;61:e78-140

Thank you