ESSENTIAL MESSAGES FROM ESC GUIDELINES

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AMI - STEMI

EUROPEAN SOCIETY OF CARDIOLOGY®

ESC ESSENTIAL MESSAGES

ESC GUIDELINES ON THE MANAGEMENT OF ACUTE MYOCARDIAL INFARCTION IN PATIENTS PRESENTING WITH STEMI*

The Task Force on the Management of ST-Segment Elevation Acute Myocardial Infarction of the European Society of Cardiology

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Take home messages

1. Very early reperfusion of the occluded infarct artery is the mainstay in the treatment of an acute myocardial infarction with persistent ST-segment elevation (STEMI).

2. Pre-hospital (ambulance) clinical and ECG diagnosis is critical for reducing the time delays between onset of symptoms and start of reperfusion. This can best be achieved by establishing a network of non-PCI-capable and PCI-capable (24h/7d) hospitals connected by an efficient ambulance service.

3. Primary PCI with stenting, when performed by an experienced team within the recommended time, is the best reperfusion treatment to save lives.

4. Primary PCI should be performed within 120 min after ECG diagnosis (first medical contact) in all patients and within 90 min in patients presenting within 2 hours and with a large infarct.

5. If primary PCI cannot be performed within the recommended time, fibrinolytic therapy (preferably with a fibrin-specific agent) should be started as soon as possible, already in the ambulance.

6. In the absence of contra-indications, all patients should receive aspirin, a thienopyridine (clopidogrel or prasugrel) and one of the following anticoagulants as soon as possible: bivalirudin or heparin, if primary PCI will be performed; enoxaparin or heparin, if a fibrin-specific lytic agent is given; fondaparinux, enoxaparin or heparin, if streptokinase is given.

7. In case of failed fibrinolytic therapy, rescue PCI should be performed, if infarct size is large and if the procedure can be done within 12h after onset of symptoms.

8. After successful fibrinolysis, transfer to a PCI capable hospital for coronary angiography, ideally between 3 to 24 hours after start of fibrinolytic therapy, is indicated in most patients.

9. Anticoagulant therapy should be stopped shortly after the PCI procedure or after 24 to 48 hours in case of fibrinolytic therapy.

10. An oral ACE-inhibitor should be given on the first day in the absence of contra-indications in patients with significant LV dysfunction.

11. Routine i.v. administration of a beta-blocker is not indicated. An oral beta-blocker should be given as soon as the patient is stable.

Take home messages

12. Statins should be initiated as soon as possible to achieve an LDL cholesterol < 100 mg/dL (2.5 mmol /L) or < 80 mg (2.5 mmol/L) if feasible irrespective of the initial cholesterol level. Risk factors for atherosclerosis should be identified and treatment started before hospital discharge.

13. At discharge and in the absence of contra-indications, all patients should be treated with ASA, a thienopyridine, a beta-blocker and a statin; in patients with significant LV dysfunction, an ACE-inhibitor (or an ARB) should be added. With the exception of the thienopyridine, these medications should be given forever.

Major gaps in evidence

There is limited experience with PCI in STEMI patients presenting later than 12h after onset of symptoms.

Transporting patients from a non-PCI-capable to a PCI-capable hospital for primary PCI remains a challenge. Even in the best networks many patients are treated with PCI outside the recommended time window. It is unknown whether pre-hospital fibrinolysis during transport to a PCI-capable hospital in patients presenting early to the EMS (emergency medical system) is beneficial if the intervention cannot be performed within the recommended time window.

Cardiologists in some hospitals are still uncertain which pharmacological treatment to start before transport.

A number of patients need oral anticoagulation after primary PCI with stenting. Whether ASA and/or a thienopyridine added to an oral anticoagulant are effective and safe in all patients, is unknown as is the optimal duration of these antithrombotic regimen.

Long-term beta-blockade post-STEMI was studied in the pre-reperfusion era . The evidence for routine long-term use of a beta-blocker in STEMI patients with preserved left ventricular function after successful reperfusion is not well documented.

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