

Management of Acute Myocardial Infarction

Date of last revision: September, 1999; AMI

Pharmacological Therapy

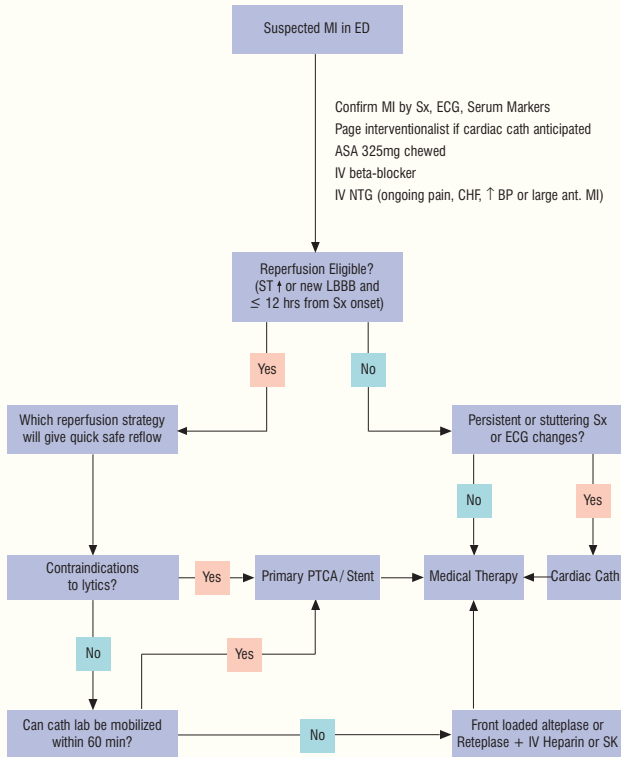
Medication	First 24 Hours	After First 24 Hours	Discharge
Aspirin	Chewed in ED (325mg)	180-325mg qd	81 mg qd indefinitely
Reperfor for ST[†] or new LBBB ≤ 12 hrs of symptom onset	Front loaded Rx treatment fibrinolytics* (dosing on back of card) or Primary PTCA	Reperfusion: alteplase/reteplase can be repeated for recurrent occlusion	
Heparin (unfractionated UFH)	IV in alteplase, reteplase, PTCA treated patients and non-ST elevation MI; large or ant. MI, AF, prior embolus, LV thrombus 60 U/kg bolus, infusion 12 U/kg/hr (max 4000 U bolus/ 1000 U/hr infusion for pts > 70kg) to maintain aPTT 50-70 seconds	48 hrs in alteplase, reteplase treated patients: SubQ heparin for all until ambulatory	Coumadin for 3-6 months if LV thrombus seen or thromboembolism; chronically for AF
Low Molecular Weight Heparin (LMWH)	Subcutaneously (SC) 1mg/kg b.i.d. for patients with non-ST elevation MI if no contraindications; all patients not treated with fibrinolytics, if no contraindications (alternative to UFH)		
Beta-Blockers**	IV Metoprolol (up to 15mg in 3 divided doses) or IV Atenolol (10mg in 2 divided doses)	Oral Metoprolol 50-100mg daily or Atenolol 50-100mg qd or other beta-blockers	Oral daily indefinitely
ACE Inhibitors	Initial dose 6.25 mg captopril followed by 12.5 mg 2 hrs later, 25 mg 10-12 hrs later, then 50 mg b.i.d. or lisinopril 5 mg initially, 5 mg after 24 hrs, 10 mg after 48 hrs, then 10 mg daily	Daily for up to 6 wks	Longer if Sx CHF or LVEF ≤ 40%
GPIIb/IIIa	Tirofiban 0.4 ug/kg/min over 30 min, then infuse 0.1 ug/kg/min for non-ST elevated MI patients at high-risk (elevated serum markers, refractory ischemia)		
Nitroglycerin	IV for 24-48 hrs if no contraindications	Only for ongoing ischemia or uncontrolled hypertension	Oral for residual ischemia
Statins			Indefinitely if LDL-C > 100mg/dl
Hormone Replacement Therapy (HRT)		After 1st 24 hrs—should not be given de novo to postmenopausal women after acute MI. Women already taking HRT plus progestin at time of AMI can continue. Counsel all postmenopausal women about potential benefits of HRT.	Offer options of HRT

**Cautions/Relative Contraindications: Heart rate < 60 bpm; PR interval > 0.24 seconds; severe PVD; SAP < 100mm Hg; 2nd or 3rd AV block; IDDM; signs of peripheral hypoperfusion; severe COPD; severe LV failure; Hx of Asthma

Non-Pharmacological Therapy

Therapy	First 24 Hours	After First 24 Hours	Discharge
Dietary Advice		Education on low-fat diet	Recommend low-fat diet
Smoking	Reinforce cessation	Reinforce cessation	Referral to smoking cessation classes if desired
Exercise	Education	Hallway ambulation	Recommend regular aerobic exercise
Pre-discharge ETT	For uncomplicated patient plan on 4-5 days	Perform pre-discharge ETT	Cath patients with significant ischemia
Measure LVEF		ECHO or MUGA prior to d/c if no LV gram	ACE inhibitors if LVEF ≤ 40% or in-hospital CHF
Cardiac Rehabilitation		Start exercise	Refer to rehab program near their home

Patient Management



Indications for Cardiac Catheterization

- Primary PTCA
- Rescue for the failed fibrinolysis
- Clinical Conditions
 - Cardiogenic shock/hemorrhagic instability
 - CHF
 - Suspected mechanical complications eg. VSD, ruptured papillary muscle
 - Recurrent symptomatic arrhythmia
- Ischemia on pre-discharge ETT

Contraindications and Cautions for Fibrinolytic Use in Myocardial Infarction

Absolute Contraindications

- Previous hemorrhagic stroke at any time; other strokes or cerebrovascular events within 1 yr
- Known intracranial neoplasm
- Active internal bleeding (does not include menses)
- Suspected aortic dissection

Cautions/Relative Contraindications

- Severe uncontrolled hypertension on presentation (blood pressure >180/110 mm Hg)[†]
- History of prior cerebrovascular accident or known intracerebral pathology not covered in contraindications
- Current use of anticoagulants in therapeutic doses (INR ≥ 2-3); known bleeding diathesis
- Recent trauma (within 2-4 wks), including head trauma
- Noncompressible vascular punctures
- Recent (within 2-4 wks) internal bleeding
- For streptokinase/anistreplase: prior exposure (especially within 5d-2y) or prior allergic reaction
- Pregnancy
- Active peptic ulcer
- History of chronic hypertension

[†] Could be an absolute contraindication in low-risk patients with myocardial infarction.

* Fibrinolytic Dosing (from front of card)

Alteplase, 15mg bolus IV, followed by 50 mg over next 30 min. followed by 35 mg over next 60 min
 Reteplase, double bolus 10 IU 30 min apart
 SK, 1.5 million IU infused over 60 min

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The following material was adapted from the ACC/AHA Guidelines for The Management of Patients with Acute Myocardial Infarction: 1999 Update. For a copy of the full report or Executive Summary as published in JACC and Circulation, visit our Web sites at <http://www.acc.org> or <http://www.americanheart.org> or call the ACC Resource Center at 1-800-253-4636, ext.694.